Infrastructure Forecast

Forecasted Budget
&
Repair Schedule

CITY OF FLORENCE KENTUCKY®

2012 - 2015

LETTER OF INTRODUCTION TAB

July 1st, 2012

To Whom It May Concern:

The following pages make up the City of Florence Public Services Infrastructure Forecast. This forecast will provide you with an overview of the activities the department expects to institute during the next three years. These activities will address infrastructure issues regarding our divisions of operations. The sections covered in this plan include the following: Streets, Parks, Sanitary Sewer, Storm Water, Water Distribution, Site Assets and Facilities.

This booklet will provide guidance and direction to our divisions of operations. This booklet will also be made available to the public through our website. The public can view this document to determine if any infrastructure in their vicinity will be due for a rehabilitation activity in the near future.

Before each division's forecast; an overview of that division is provided. This overview will provide some basic and complex information which will allow you to get a feel of how that particular division operates.

We hope that any questions you may have, will be answered in the following pages. If you still have questions, feel free to contact us. Our contact information is provided below.

Sincerely,

City of Florence
Public Services Department

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Florence, Kentucky 41042
(859) 647-5416
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STREETS TAB

CITY OF FLORENCE
PUBLIC SERVICES DEPARTMENT

STREET REPAIR POLICIES AND APPROACH
2012-2015

INTRODUCTION
The City of Florence Public Services Department is responsible for all maintenance, repairs, rehabilitation and inspection of streets owned by the City. The department is responsible for maintaining in excess of **168** lane miles on more than **366** City owned and maintained streets. In addition, the City performs limited maintenance on the State roads that are located within the City limits. These roadways account for over an additional **76** lane miles.

Many streets within the City were constructed during the building booms of the 1950s, 1960s, 1970s, 1990s and the first five years of the 21st Century. The majority of those streets that were installed prior to the 1990s were typically constructed of reinforced concrete that was poured six inches thick. This concrete was reinforced with welded wire fabric and was designed for a service life of approximately 20 to 30 years. Nearly all of the City's streets were built with a curb and gutter cross section. Many of these streets were built before subdivision regulation standards were in place and while construction practices varied between developers. Street construction standards were finally put in place in the late 1980s. These standards were then published in the Boone County Subdivision Regulations. Beginning in the 1990's streets began to be constructed with curb and gutter along with full depth asphalt. These streets were designed with a service life of approximately 30 years.

Many streets in the City are now nearing the end of their service lives. Pavement deterioration begins from the moment they are built. Factors that contribute to this deterioration include increased traffic, increased weight loads, water infiltration, freeze/thaw cycles, and ultraviolet radiation from the sun. These factors become even more destructive as the pavement nears the end of its design life. The abundance of streets requiring repairs dictates the need for a comprehensive repair strategy and pavement management system.

This document presents a brief outline of the department's pavement management strategies. The strategies contained in this document will illustrate how the City strives to maintain the public streets in a good condition without the need to use expensive reconstruction techniques.

Ideally, cost effective street repairs will occur before a pavement reaches a dilapidated condition. The department has a policy in place that guides us in using preventative maintenance techniques in order to help prolong the life of City roadways. Over the life cycle of a street, a street will receive a variety of rehabilitation processes. Two processes that are commonly used when the life of a street is nearing its end are concrete replacement and asphalt overlays. These processes are initiated only after an extensive amount of research has been done, while taking caution as to not overlook how the processes will affect the City's street network as a whole.

This document is updated annually in order to include any advances in this field that the City has or will implement as well as any changes that need to be implemented due to various factors. The information we use in order to come up with the best strategies, in regards to street repairs, is acquired from many resources.

One resource we use continuously is the evaluation of our streets through our street inspection program. This program consists of the City's street network being divided into three zones. These zones are then individually inspected once every three years. This inspection process is used to identify a multitude of street deficiencies which are then given a rating as to their severity. Once the inspection process is completed, these ratings are input into our GBA System. This system then processes the new ratings as well as depreciating previous year's ratings. This information is then used by GBA to generate an overall PCI (Pavement Condition Index) Report. The PCI Report allows us to compare streets in a rating system format. Once the poorly rated streets are identified, numerous other thought processes come into play in order to identify the streets that will become part of our Infrastructure Forecast. This process is done while always maintaining the highest level of fiscal responsibility.

Another thought process that is used in identifying streets for our repair forecast is the adjustment of the repair schedule in order to allow the coordination between the repairs of other utilities such as water & sewer.

After all of our processes have been completed, we will then figure the cost of repairing the streets we have identified. These cost figures are based off a preliminary budget estimate. These estimates will be updated based on a more thorough examination of the needed repairs prior to the start of any work.

ROAD SURFACE MANAGEMENT STRATEGIES

The City of Florence Public Services Department utilizes four distinct road surface management strategies in its daily routine. These strategies can be organized as follows:

- *Routine Maintenance*
- *Preventive Maintenance*
- *Rehabilitation*
- *Reconstruction*

A fifth category, Deferred Action, could also be added to the above list. A street in the Deferred Action list would be a street with a known deficiency but without funding or resources to complete the corrective action necessary in the particular year that it is scheduled to be repaired.

ROUTINE MAINTENANCE

The following activities conducted by the Public Services Department are categorized as **routine maintenance** activities:

Street Inspections

The department performs yearly inspections on one third of all City owned streets and this information is entered into the department's infrastructure management software system (GBA). This information then provides the department with each street's Pavement Condition Index (PCI), which is then used, in addition to other processes, to determine the repair strategy and scheduling priority of any streets in need of rehabilitation.

Street Creep Inspections / Joint Installation

Street creep or street growth refers to concrete streets slowly lengthening with time. The lengthening occurs as a result of repeated cycles of concrete contraction during cold weather and then concrete expansion during hot weather. During periods of cold weather there is contraction of the concrete pavement, during which joints in the concrete open. Grit and debris from the street surface can then enter into the street joints. When debris enters the street joints and the concrete expands during hot weather, the grit-filled joints cannot close to absorb the expansion. When this happens, the compression at the joints causes the street to lengthen. As the street continues to slowly "grow" with repeated cycles of contraction and expansion, it pushes on and can damage catch basins, manholes, sidewalks, driveways, foundations and other streets that might abut it.

To battle this issue the department has installed Street Creep Joints on concrete streets that have been identified as potential problem areas as well as constituting an elaborate crack sealing program. Once these joints are installed the department will then perform yearly Street Creep Joint Inspections. This information is then given to our Geotechnical Engineer, Thelen, who gives us recommendations on any necessary repairs. Thelen is also utilized during the engineering phase of our street projects; in order to identify and address any existing or possible future street creep issues.

Street Modeling

This process consists of having GBA take values that are assigned to any deficiencies found through the inspection process and extrapolate that data throughout an assigned time period. In setting up the model, there are many sets of data that are necessary for the model to compile a "forecast". Included in this data are repair strategies, pavement types, road classifications, costs related to each repair strategy and forecasted budgets. The model then compiles all of this data to give us a forecast of how each street will age, when repairs will be needed, the cost of that repair, how that repair fits into our projected budgets and what type of repair will be necessary.

Street Sweeping

The department's goal is to sweep all streets within the City eight times per year. There are many reasons the department considers this an essential work activity. Street Sweeping removes dirt and debris which can cause potential safety hazards to motorists and pedestrians. Not to mention, debris could also clog storm sewer systems if left on the street. This debris could contain environmental contaminants, which if left to drain into the storm system could pollute local groundwater and stream systems. In addition, gravel and debris left on the pavement can, over time, escalate surface wear. These factors and many others make Street Sweeping a good practice to follow.

Pothole Patching

Periodically, the department receives reports of potholes on City streets from various sources. These reports are monitored and compiled into a list of requested repairs. Once reported, severe potholes are repaired as soon as possible, typically within seventy-two hours. All other reports of potholes are kept on record until such time that crews and materials can be scheduled effectively and efficiently. Frequency and quantity of potholes on a street is also a good indicator of other potentially needed repairs.

PREVENTIVE MAINTENANCE

The following activities conducted by the Public Services Department are categorized as the department's **preventive maintenance** activities:

Crack Sealing

Crack Sealing joints and cracks on the surface of City maintained streets is perhaps one of the most critical preventive maintenance activities that the department performs. Crack Sealing is a complex process that involves the cleaning and routing of cracks in the pavement surface in order to fill them with a petroleum-based sealant. This sealant prevents water from infiltrating under the street which thereby prevents subsurface erosion and the continued deterioration of the crack. This process also prevents debris from filling joints which could ultimately cause more cracking or possible Street Creep issues.

The departmental policy is to crack seal all City streets on a seven year schedule. The City is divided into seven sections with each section containing approximately 22 lane miles of street. Each section is sealed once every seven years. A crew can only seal during certain weather conditions. These conditions require that the pavement is dry and that the temperature is above and below certain degrees in order to achieve the maximum performance of the sealant material. It also should be noted that the Boone County Subdivision Regulations requires developers of new streets to seal those streets as a final phase of the construction process.

Mill and Patch

Frequently, budgetary constraints do not allow all needed repairs to be completed at the appropriate times. When these instances occur, the department utilizes the repair technique known as "mill and patch." This process starts with the identifying of deteriorated joints, cracks, or gutter lines in the pavement surface. Once these have been identified the department's crews will mill these areas out and then fill the voids with asphalt pavement. This process can restore the rideability of the street while allowing a delay of a resurfacing project for up to two to three years.

Undersealing / Mudjacking

The thought process in which this entails is that the street's surface is only as good as the base upon which it sits. Undersealing is most effective and only performed, by the department, when utilized under rigid concrete pavements. This preventive maintenance practice fills voids, which are caused by subsurface erosion, under the pavement surface with a slurry of cement, fly ash and water. This mixture then cures like a stiff soil and creates a stable base under the pavement.

Departmental policy dictates that all City streets scheduled to receive an asphalt overlay or scheduled for complete concrete replacement, be evaluated for undersealing the year prior to the commencement of the project. If undersealing is necessary, the street is added to the undersealing list located in the Infrastructure Forecast. In addition, any street with a known void beneath the pavement is also a candidate for undersealing. While performing the undersealing process any problems that are associated with subsurface drainage or drain outlets are evaluated and addressed.

REHABILITATION

The following activities conducted by the Public Services Department are categorized as the department's **rehabilitation** activities:

Concrete Replacement

Normally concrete streets have a longer service life than asphalt streets. With that being said, long-term costs are reduced when a street can retain a concrete surface. Streets are evaluated as part of the inspection process and during the compilation of the Infrastructure Forecast to determine any replacement needs. Ideally, the department's goal is to keep concrete streets concrete. Because of this philosophy the City crews have become skilled in concrete replacement techniques.

Typically, streets with less than a 40% replacement need are rehabbed by City crews. It is generally not cost effective for the department to replace more than 40% of a concrete street with concrete. Occasionally, however, exceptions to the 40% rule occur, particularly when sub-base failures are prevalent on the street. These types of failures require complete removal of the failed pavement in order to correct the sub-base problem. These cases are considered a reconstruction technique rather than a rehabilitation technique.

When concrete replacement is needed; any failed joints, cracks, and gutters are identified and marked by a representative from the Engineering and Inspection Division (EIS). Any other problems such as subsurface drainage needs are evaluated and addressed at this time as well. The marked sections are then cut out and removed. This then allows the subgrade to be prepared and stabilized prior to replacing the concrete.

Mill and Overlay

Concrete streets with more than a 40***%*** replacement need or deteriorated streets that were previously overlaid; are typically milled and overlaid with a new asphalt surface. This type of work is not performed by City crews but is put out to bid in order to be performed by an outside contractor.

The City's Engineer will evaluate these streets and prepare plans and recommendations for the rehabilitation project. In many instances the engineer will recommend advanced paving technologies such as paving fabrics and reflective crack retardants which are used to extend the life of the overlaid surface.

As the project advances there are many conditions other than the street surface that are evaluated. These conditions will frequently include deteriorated catch basins, badly worn curbing and subsurface issues. When a problematic catch basin is identified it will typically be replaced and any subsurface drains will be tied into it. In instances where badly worn curbing is identified the department will decide on whether or not to replace the curbing with a box type curb or a standard roll curb. The evaluation of any subsurface conditions will typically take place after the milling process has been completed. In most instances if extensive repairs are required; the department will make a fiscally responsible decision based upon the City Engineer's recommendation of how to proceed.

RECONSTRUCTION

Reconstruction techniques are utilized when a street has deteriorated to the point that rehabilitation strategies do not adequately address the problems of that street. Reconstruction will also be used when a street can no longer accommodate the traffic that uses the street or in instances when the street was not originally constructed to City standards. Some streets, such as Glenn Rose, Locust Lane and Clark Street are gravel and may warrant an assessment in order to bring them up to current City standards. Each reconstruction project is unique and a variety of engineering techniques are used to improve the condition of the street. Each street requires a different approach and the City Engineer would be consulted to help determine the best approach to take.

SIDEWALKS AND BIKE PATHS

The department is dedicated to making the City as pedestrian friendly as possible. Whenever a street project is planned, the department considers the feasibility of sidewalks if none exist. If sidewalks are already a part of the landscape of that area, then the department will identify and correct any portions of the sidewalks that are in need of repair. Sometimes repairs will occur during a project and other times they are addressed by our Street Division.

The department also strives to achieve the connectivity of the many bike paths that are included inside the City limits. As a long standing practice the department has continued to implement and improve bike paths in City owned parks. With that being said, there are many bike paths throughout the City which run along streets and through parks. The vision of the department is that a pedestrian will have access from one side of the City to the other; whether it be by walking, skating or by bike.

FORECASTED PROJECTS

The following forecast represents a three-year plan using anticipated funding. The anticipated funding does not include the possibility of an assessment project. This forecast will provide for the repair and significant improvement of City streets. This forecast will be updated annually based on annual pavement inspections, computerized pavement management techniques, the pavement condition index (PCI) and the human decision making element.

The PCI is generated through the utilization of the GBA Street Master software. This software is a GIS linked pavement management program that utilizes the information acquired through street inspections and other data. Once the street inspection data has been entered into the program, the program will then calculate a PCI that corresponds with every City street based upon the data entered. This software also allows us to generate a general forecast far into the future. This forecast is known as modeling. Modeling will allow us to generate a “long term” forecast, which will help us best manage the techniques mentioned in this document while providing us with a glimpse of what funds will be needed in order to keep the City’s street system at a certain level.

The following forecast was developed based on public input, staff recommendations, geographical relationships to other deteriorated streets, the Pavement Condition Index (PCI), and estimated costs of necessary improvements.

UNFUNDED STREET PROJECTS

There are some street projects that did not make the budgeting cycle for the next three years or where an upgrade in the repair strategy could be justified. These streets and their repair strategies require an amount of funds that are not able to be taken from the budgets of the next three years while keeping the rest of our streets at a high level of quality. These projects are unfunded but in the event that funds are available, these streets will be rehabbed during the next three years. The streets and rehab techniques are as follows:

PROJECT	DESCRIPTION
Main Street	Mill and Overlay
St. Judes Circle	Complete Replacement
Circle Drive	Complete Replacement

City of Florence GIS Map

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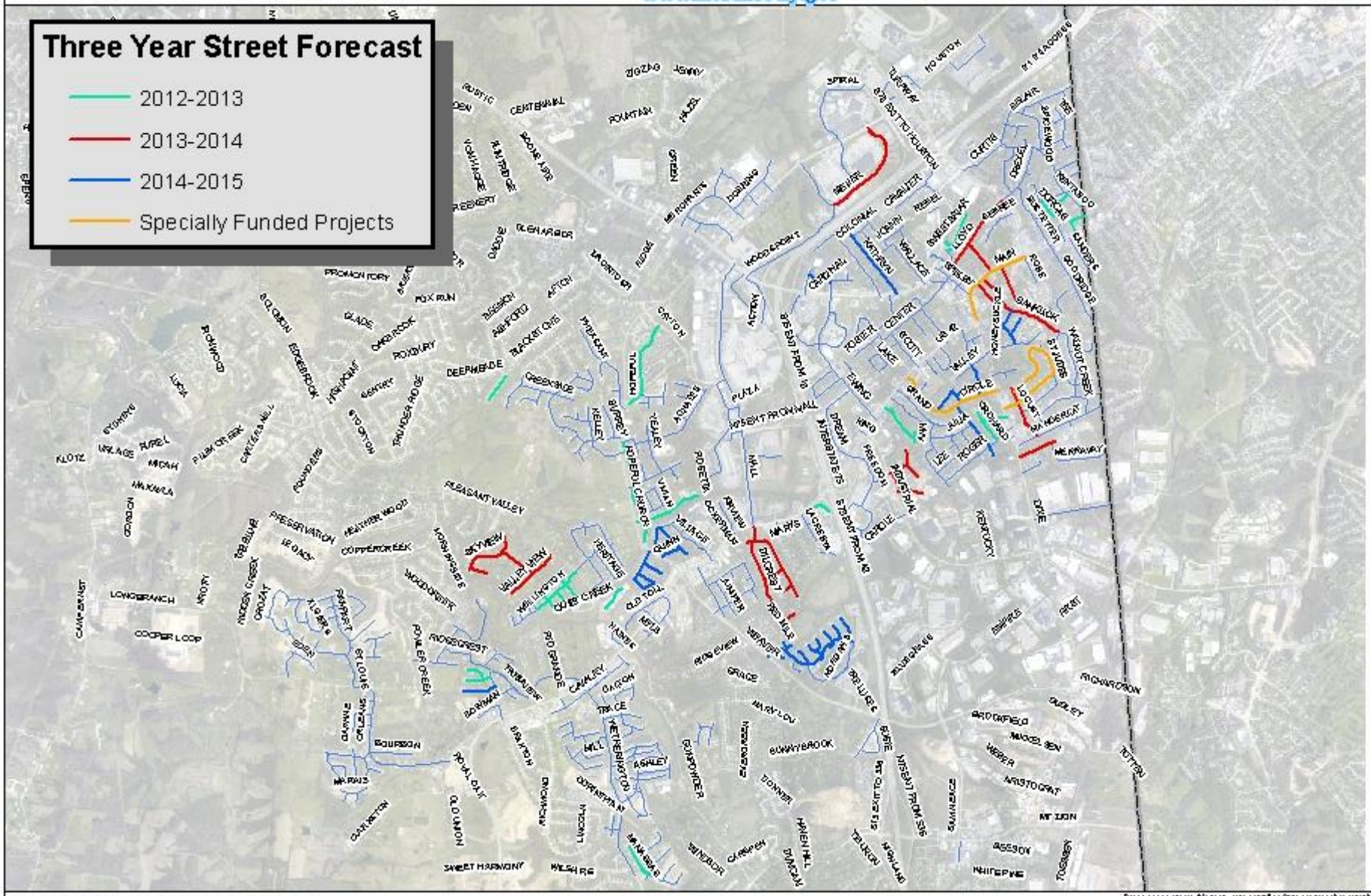


Data used to create this map were compiled from sources that comply with National Map Accuracy Standards. City of Florence assumes no warranty with respect to the accuracy or content of the information provided by this map. This map should be used for general planning purposes only.

0 2,950 5,900 11,800 17,700 23,600 Feet

1 inch = 4,335 feet

CITY OF FLORENCE KENTUCKY

City of Florence, Kentucky - A Great Place To Live, Work, and Play

STREET REPAIR BUDGET & SCHEDULE

FISCAL YEAR - 2012/2013

BUDGET

EXPENDITURES	
Municipal Aid Road Fund (Contracted Work)	$325,000.00
Municipal Aid Road Fund (City Crew Work)	$200,000.00
Capital Improvement Fund	$975,000.00
Sidewalks / Bike Path	$100,000.00
Street Striping / Parking Lot Improvements	$95,000.00
TOTAL	**$1,695,000.00**

CONTRACTED REPAIRS

PROJECT	DESCRIPTION
Amherst Court	Mill and Overlay
Anchor Way	Mill and Overlay
Beverly Place	Mill and Overlay
Blackstone Drive	Mill and Overlay
Collingwood Court	Mill and Overlay
Dorcas Avenue	Mill and Overlay
Fescue Court	Mill and Overlay
Holiday Drive	Mill and Overlay, Sidewalk
Hollywood Drive	Mill and Overlay
Hopeful Road	Mill and Overlay
Imperial Court	Mill and Overlay
Lendale Drive	Mill and Overlay
Lexington Avenue	Complete Replacement
Manassas Drive	Mill and Overlay
Meadow Lane	Mill and Overlay
Orchard Drive	Mill and Overlay
Red Clover Court	Mill and Overlay
Rosetta Drive	Mill and Overlay
Stratford Court	Mill and Overlay
Sweetbriar Avenue	Mill and Overlay
Virginia Avenue	Complete Replacement
Wellington Drive	Mill and Overlay
Nature Park (Bike Path)	Bike Path Overlay
Orleans South (Bike Path)	Bike Path Overlay
Street Striping / Parking Lot	Improvements

Blue shading indicates that this project will correspond with a water main project
*Pavement Condition Index

STREET DIVISION SCHEDULED REPAIRS

Cracksealing: The streets to be crack sealed will be those indicated on the map in **Appendix A**; according to the appropriate fiscal year. The streets rehabbed in fiscal year 2011/2012 will also be included in this year's Cracksealing Schedule.

Undersealing: Undersealing will take place on the following streets: *Adella Drive, Canterbury Drive, Dilcrest Drive, Dortha Avenue, Harms Hill, Hillcrest Drive, Lloyd Avenue, Locust Avenue, Lynn Street, Meadow View Drive, Pinehurst Drive, Sanders Drive and Spruce Drive.*

Pavement Replacement: Pavement replacement will take place on the streets scheduled for rehab in fiscal year 2013/2014.

STREET REPAIR BUDGET & SCHEDULE

FISCAL YEAR - 2013/2014

BUDGET	
EXPENDITURES	
Municipal Aid Road Fund (Contracted Work)	$225,000.00
Municipal Aid Road Fund (City Crew Work)	$210,000.00
Capital Improvement Fund	$ 1,000,000.00
Sidewalks / Bike Path	$100,000.00
Street Striping / Parking Lot Improvements	$100,000.00
TOTAL	**$1,635,000.00**

CONTRACTED REPAIRS

PROJECT	DESCRIPTION
Adella Drive	Mill and Overlay
Banklick Drive	Mill and Overlay
Canterbury Drive	Mill and Overlay
Columbia Drive	Mill and Overlay
Dilcrest Drive	Mill and Overlay
Dortha Avenue	Mill and Overlay
Harms Hill	Mill and Overlay
Hillcrest Drive	Mill and Overlay
Lloyd Avenue	Mill and Overlay
Locust Avenue	Mill and Overlay, Sidewalk
Lynn Street	Mill and Overlay
Meadow View Drive	Mill and Overlay
Meijer Drive	Mill and Overlay
Rosebrook Drive	Mill and Overlay
Skyview Drive	Mill and Overlay
Spruce Drive	Mill and Overlay
Sussex Drive	Complete Replacement
Valley View Drive	Mill and Overlay
Youell Street	Mill and Overlay
Center Street Cemetery	Pavement Improvement
Orleans North (Bike Path)	Bike Path Overlay
Rampart Way (Bike Path)	Bike Path Overlay
Street Striping/Parking Lot	Improvements

Blue shading indicates that this project will correspond with a water main project
*Pavement Condition Index

STREET DIVISION SCHEDULED REPAIRS

Cracksealing: The streets to be crack sealed will be those indicated on the map in **Appendix A**; according to the appropriate fiscal year. The streets rehabbed in fiscal year 2012/2013 will also be included in this year's Cracksealing Schedule.

Undersealing: Undersealing will take place on the following streets: *Barnwood Court, Belmont Court, Burgess Drive, Commerce Place and Quinn Drive.*

Pavement Replacement: Pavement replacement will take place on the streets scheduled for rehab in fiscal year 2014/2015.

STREET REPAIR BUDGET & SCHEDULE

FISCAL YEAR - 2014/2015

BUDGET

EXPENDITURES	
Municipal Aid Road Fund (Contracted Work)	$230,000.00
Municipal Aid Road Fund (City Crew Work)	$215,000.00
Capital Improvement Fund	$1,050,000.00
Sidewalks / Bike Path	$100,000.00
Street Striping / Parking Lot Improvements	$100,000.00
TOTAL	**$1,695,000.00**

CONTRACTED REPAIRS

PROJECT	DESCRIPTION
Alan Court	Mill and Overlay
Alan Street	Mill and Overlay
Barnwood Court	Mill and Overlay
Belmont Court	Mill and Overlay
Burgess Drive	Mill and Overlay
Claiborne Court	Mill and Overlay
Commerce Place	Mill and Overlay
Edward Avenue	Mill and Overlay, Sidewalk
Fair Court	Mill and Overlay
Gloucester Drive	Mill and Overlay
Harness Lane	Mill and Overlay
Hitching Post Place	Mill and Overlay
Honeysuckle Drive	Mill and Overlay
Honeysuckle Terrace	Mill and Overlay
Kathrynn Avenue	Mill and Overlay, Sidewalk
Lawrence Drive	Mill and Overlay
Quinn Drive	Mill and Overlay
Saddlebrook Lane	Mill and Overlay
Saratoga Way	Mill and Overlay
Sassafrass Lane	Mill and Overlay
Thorne Hill Drive	Mill and Overlay
Trotters Way	Mill and Overlay
Windfield Way	Mill and Overlay
Winthrop Circle	Mill and Overlay
Winthrop Place	Mill and Overlay
Stringtown Park	Bike Path Overlay
Brookside Park	Bike Path Overlay
Kensington Park	Bike Path Overlay
Street Striping/Parking Lot	Improvements

STREET DIVISION SCHEDULED REPAIRS

Cracksealing: The streets to be crack sealed will be those indicated on the map in **Appendix A**; according to the appropriate fiscal year. The streets rehabbed in fiscal year 2013/2014 will also be included in this year's Cracksealing Schedule.

Undersealing: Undersealing will take place on the following streets: *Banklick Street, Bayfield Court, Cayton Road, Chipman Drive, Creekside Drive, Fieldstone Court, Greystone Court, Hearthstone Court, Meadow Creek Drive, Richard Street, Shadow Ridge Court, Stoneridge Lane and St. Judes Cr.*

Pavement Replacement: Pavement replacement will take place on the streets scheduled in fiscal year 2015/2016.

WATER & SEWER TAB

CITY OF FLORENCE
PUBLIC SERVICES DEPARTMENT

WATER SYSTEM REPAIR POLICIES AND APPROACH
2012-2015

INTRODUCTION
The City of Florence Public Services Department takes a very proactive role in providing potable water, of the best possible quality, to its customers. In trying to achieve a high level of water quality, the department maintains approximately **8,729** water meters, **145** miles of water line, **3,664** water valves and **1,520** fire hydrants. The department uses many techniques in keeping the distribution system at a high level of performance. This document will highlight and provide a brief overview of some of the key techniques that are utilized.

The following paragraph is a brief overview of how the Water Division, of the Public Services Department, operates. The City obtains its water from the Boone Florence Water Commission through a 30 year agreement which was signed in 1999. This commission was formed in order to develop the means in which to provide the needed quantity and quality of water to the customers of the City of Florence, as well as Boone County. The commission purchases its water from Greater Cincinnati Water Works. The arrival of this water into our system is accomplished through a piping system that runs from the Greater Cincinnati Water Works' treatment facility, then under the Ohio River to a pumping station known as the Constance Pump Station. This station then pumps the water up and into the water distribution systems of the City of Florence and the Boone County Water District.

Duties of the Public Services Department's Water Division include but are not limited to the following:

- Water shut-offs for delinquent water bills
- Meter changes
- Meter upgrades
- Meter installation
- Water main repairs
- Hydrant inspections
- Hydrant repairs
- Vault inspections
- Vault repairs
- Annual water valve turning program
- Annual cross-connection program
- Water sampling for compliance with state and federal regulations
- Monthly Operating Report to the Kentucky Division of Water for both the City of Florence and the Boone Florence Water Commission
- Maintenance and reporting of all items required through the agreement with the Boone Florence Water Commission
- Consumer Confidence Report
- Identification of projects that will improve on the hydraulics and quality of the water that is distributed throughout our system while striving to keep disruptions in service at a minimum

In addition to the previously mentioned duties, the City of Florence Public Services Department works diligently to provide top quality water to every water service. The department performs over 500 water quality tests annually to assure that top quality water will reach each customer we have. The department will also meet or exceed all of the state and federal guidelines for water quality testing. For additional information on our water quality, please see our Consumer Confidence Report which can be either picked up at our office or viewed on our website.

WATER DISTRIBUTION MANAGEMENT STRATEGIES

The City of Florence Public Services Department utilizes four distinct water distribution management strategies in its daily routine. These strategies can be organized as follows:

- *Routine Maintenance*
- *Preventive Maintenance*
- *Rehabilitation*
- *Replacement*

The remainder of this document will provide an overview of the strategies we utilize.

ROUTINE MAINTENANCE

The following activities conducted by the Public Services Department are categorized as **routine maintenance** activities:

Daily Chlorine Samples

The department monitors the free and total chlorine residuals throughout the City on a daily basis. There are a total of ten daily samples that are taken. These samples are taken from sites that have been approved through the Kentucky Division of Water as being representative of our system as a whole. These samples give the department an idea of the water quality throughout our system and will allow us to become more proactive in dealing with possible issues instead of being solely reactive.

Monthly Bacteria Samples

The department collects 42 samples per month and sends them to the Greater Cincinnati Water Works' lab for analysis. These samples are another tool used to keep our finger on the pulse of the water quality in our system. The results of these samples are sent to the Kentucky Division of Water in order for the department to stay in compliance with state and federal drinking water regulations.

Stage Two Disinfection By-Products Rule (IDSE Program)

This program began in October of 2007. As a result of our samples taken during our evaluation period, a reduced monitoring schedule has been approved by the Kentucky Division of Water. Compliance sampling started May of 2012.

Lead and Copper Sampling

Due to state regulations, the City is required to perform lead and copper testing once every three years. The way this three year cycle falls; means that the City will perform testing this year.

The sample sites, which are residential, have been submitted and approved by the Kentucky Division of Water. The residencies which have been chosen as sample sites will be sent letters asking for their participation in this program. The department will collect 30 samples from 30 participating residencies, to be tested for unhealthy lead and copper levels. The results of past lead and copper sampling are provided in our Consumer Confidence Report. The City has always been in compliance in regards to the lead and copper testing regulations.

The City of Florence does not have any lead water mains in their distribution system.

As with any sampling, any sample that tests positive for a monitored substance will require the department to provide notification as is stated in the Kentucky Division of Water Drinking Water Regulations.

PREVENTIVE MAINTENANCE

The following activities conducted by the Public Services Department are categorized as **preventive maintenance** activities:

Meter Testing Program

All water meters three inches or larger are tested annually. This testing of the large meters is done to ensure that customers who typically use a large amount of water are having their water usage monitored accurately. In addition to testing being tested for accuracy, all large meters are inventoried and inspected.

Due to the much lesser amount of water that travels through meters smaller than three inches and because the lesser flow of water rarely causes meter efficiency problems; meters less than three inches are tested in a continuous yearly effort. Meters that range in size from 5/8” to 1” are tested every ten years. Meters from 1.5” to 2” are tested every five years. All meters tested must meet the American Water Works Association Standards for accuracy.

Any meters that malfunction are repaired and retested or replaced promptly. A request can be made by the customer to have a meter tested.

Valve Inspection Program

The department has instituted and performs an annual Valve Inspection Program. This program breaks the City’s valves into three groups: critical, secondary and common valves. The critical valves are inspected and exercised on an annual basis. The secondary valves are broken into four groups; each group is exercised and inspected once every four years. All valves that malfunction are repaired or replaced as needed. This is a critical operation of the department as it keeps the possibility of a wide scale disruption of service at a minimum by keeping the department’s water valves in proper working order.

Hydrant Inspection Program

The department has instituted and performs an annual Fire Hydrant Inspection Program. This program breaks the City’s fire hydrants into four zones, with each zone being inspected once every four years. All hydrants that malfunction are repaired or replaced as needed.

Hydrant Flushing Program

The department performs flushing of all water mains that dead end. The department performs the annual Hydrant Flushing Program in the spring and fall months. This program is done to ensure that these dead ends meet all water quality standards. An added plus of this program is that it cleans the water main that is being flushed as well.

Water System Modeling

Typically, on an annual basis, the department has an engineering firm run a model that incorporates variables of how our system performs during certain instances. The department receives many model runs from this process and one example of these would be a model that depicts the pressure throughout the system during times of peak demand. The department also receives information on velocities, flow rates and other valuable miscellaneous information. This information is used in the decision making process during the planning phase of water system related construction projects. The information provided by the modeling is also useful in determining ways in which to improve the hydraulics and water quality of the department's water system.

Pressure Testing

The department performs annual pressure testing throughout the water system. The information that is accumulated from these tests is used in making revisions to our Hydraulic Water Model. Once the model has been updated, from our current pressure readings, we then identify and evaluate areas that may need to be addressed due to the various scenarios that have been incorporated into the model.

REHABILITATION

The following activities conducted by the Public Services Department are categorized as **rehabilitation** activities:

Water Meter Upgrade Program

The department is in the initial stages of implementing a new meter reading technology known as a Mesh System. This system will read all of our water meters with a click of a button; a click of the button in the confines of an office setting! This technology will eliminate the need to either drive by or personally visit a particular meter in order to get a reading. This technology will also allow us to greatly improve the quality of service that is provided to our customers through better response times and by providing the customer with a multitude of tools to monitor their usage. We will be utilizing this technology by the Summer of 2012.

Water Main Rehabilitation Program

The department evaluates the condition of water mains annually using water main break history as well as a Water Main Rehabilitation Matrix. This process allows the department to identify areas of the distribution system that are in need of repair. One of the techniques used in rehabilitating a water main is called relining. This process allows for the upgrading of the structural integrity of the water line as well as improving on the water main's C-Factor. The C-Factor rates the smoothness of the inside of the water main and also relates to the hydraulic condition of the main. The better the C-Factor the more easily the water can travel through the main causing less issues such as air in the water, which makes the water appear milky. Although this type of program can be expensive, it is far less intrusive and disruptive to the public because there is no need to perform any extensive excavation work.

Water Valve Rehabilitation Program

The department evaluates information from inspection records to determine any valves that may meet the criteria to be rehabilitated. As mentioned in valve exercising, it is crucial to have valves in good working condition as to reduce the need for any unnecessary disruptions in service when water system repairs are necessary. Usually valve rehabilitation and water main rehabilitation are performed as a joint project on a particular section of the water system.

Fire Hydrant Rehabilitation Program

The department evaluates the information from inspection records and other sources of information to determine which fire hydrants meet the criteria to be rehabilitated. One of those other sources of information on the condition of the department's fire hydrants is the Fire Departments. The local Fire Departments routinely exercise our hydrants while taking pressure readings. Due to the vested interest in hydrants that are fully operational, the local fire departments are very proactive in notifying the department of any deficiencies that they may come across. Unlike the water valves, fire hydrants are routinely rehabilitated separately from the rehabilitation of other items.

Rehabilitation activities will make up a vast majority of the budget amount that is designated to operate the water system.

REPLACEMENT

The following activity conducted by the Public Services Department is categorized as a **replacement** activity:

Complete Line Replacement

This replacement technique is utilized when a water main or its attached devices have reached a point that rehabilitation strategies do not adequately address the issues. This technique can also be utilized to address water delivery capabilities as well as water quality issues.

Each replacement project is very unique and will utilize a variety of engineering techniques. The department will base its decision of replacement on a multitude of information. Some of this information will come from inspection reports on water appurtenances. These inspections allow for the rating of the condition of a specific device or a section of water main. Based on these condition assessments a number is associated with the deficiency and a water main replacement matrix is then generated. It is through this matrix that the department is able to correctly identify parts of the water system that are in need of replacement.

Due to the extensive excavation and disruption of service, replacement is usually the last resort in the department's water system strategies.

CITY OF FLORENCE
PUBLIC SERVICES DEPARTMENT

SANITARY SEWER REPAIR POLICIES AND APPROACH
2012-2015

INTRODUCTION
The City of Florence Sanitary Sewer System consists of **137** miles of sanitary sewer line, **3,539** manholes and **11** pump stations. The Public Services Department is responsible for the maintenance and management of this system.

The department provides project management, preventative maintenance, repairs and regulatory compliance requirements for the system. Duties performed by departmental personnel include system cleaning, CCTV inspections, smoke & dye testing, flow monitoring, pump station maintenance and system repairs. The department is also responsible for the project management of contracted work, oversight of engineering studies, as well as, inspection and acceptance of new construction by developers.

The City transports its sewage to Sanitation District NO. 1 (SD1) by both gravity and pumping for treatment. All stations are monitored 24 hours a day, 7 days a week with Sensaphone Telemetry Units set with alarm conditions. Two pump stations, Greenview and Pheasant Run are equipped with backup generators. The remaining nine pump stations are wired with transfer switches to plug in portable generators, if necessary.

The City of Florence is one of only two cities within the three Northern Kentucky Counties that continues to maintain its own water, sanitary sewer, and storm sewer systems. This full service approach has always been a source of pride to the mayor, city council, employees, and residents of the City of Florence. It has always been the belief of the City that through this full service approach we can deliver to the residents a higher level of customer service, which is both efficient and fiscally responsible.

The City owned sanitary sewer collection system has 64 miles of clay pipe that was constructed in the 1960's to 1970's, 4 miles of concrete pipe that was constructed in the 1970's to 1980's and 68 miles of PVC pipe that was constructed in 1990's to the 2000's. The pipes range in size from 6" to 30".

There are several transfer points from which flows from SD1 enter and pass through the City system. There are four points, known as Biggs, Sanders, Fowler Creek and Tee from which all sewage enters the SD1 collection system for treatment at either SD1's Dry Creek or Western Regional Wastewater Treatment Plan, as the City does not provide municipal sewage treatment.

The remainder of this document presents a brief outline of the department's sanitary sewer management strategies. The strategies outlined in this document will illustrate how the City

strives to maintain the sewer system using the latest systematic approaches while constantly searching for low cost repairs strategies.

SANITARY SEWER MANAGEMENT STRATEGIES

The City of Florence Public Services Department utilizes four distinct sanitary sewer management strategies in its daily routine. These strategies can be organized as follows:

- *Routine Maintenance*
- *Preventive Maintenance*
- *Rehabilitation*
- *Replacement*

The remainder of this document will provide an overview of the strategies we provide.

ROUTINE MAINTENANCE

The following activities conducted by the Public Services Department are categorized as **routine maintenance** activities:

Manhole Inspection

Manhole inventories and inspections are conducted in the field and documented in Lucity. During the inspection process, each manhole is geographically fixed with the use of a handheld global positioning system with sub-meter accuracy. Digital photos are taken of the site, manhole layout and any abnormalities present. These photos are attached to both the inventory and the inspection record within Lucity. All condition ratings are filtered through a weighted matrix. This produces a Structural Condition Number that provides direction with our manhole rehabilitation efforts.

Main Line Televising

The division operates a state-of-the-art Cues CCTV Inspection Truck with a self-propelled LAMP (lateral and mainline probe) system. The *self-propelled* LAMP accomplishes a one-pass pan and tilt inspection of the mainline ranging from 6" through 24" diameter, with a simultaneous inspection of the adjacent lateral services up to 80 ft. Equipped with two high-resolution cameras, the LAMP picture in picture feature enables the operator to monitor the pan and tilt inspection of the mainline and launch a camera from the mainline to inspect the adjacent lateral service. LAMP is an essential inspection tool for identifying infiltration and inflow, solids accumulation, root infiltration, pipe defects, and the structural condition of lateral services and mainline sewers.

The Sanitary Sewer Division has a dedicated CCTV inspection crew televising the system daily. Each year the sewer division starts in one of the six sewer sheds scheduled for that year and televises the sewer main lines. It takes four years to televise all six sewer sheds.

PREVENTIVE MAINTENANCE

The following activities conducted by the Public Services Department are categorized as preventive maintenance activities:

Pre & Post Flow Monitoring

The Public Services Department began its flow monitoring program in 2003. Realizing the importance of benchmark and historical data as a guide for directing the Stormwater Removal Program as well as quantifying the success of the program; the department embarked on developing a flow monitoring program that was as comprehensive and effective as could be found in both the public and private sector. The City currently follows stringent guidelines originally developed by R.D. Zande & Associates, now known as Stantec Consulting Services Inc., during their two-year long System Wide Model Project for the Metropolitan Sewer District of Greater Cincinnati (MSDGC). This program includes a well documented systematic approach to flow monitoring.

Exterior Commercial/Residential Smoke & Dye Testing

The smoke & dye testing program has seen increased documentation and procedural changes. Currently smoke testing is conducted in the traditional manner with both public and private occurrences documented on field logs and evidenced with a digital photographic record. The field logs are data processed into Lucity with the photographic record attached. Dye testing is used to confirm smoke occurrences. The results are documented on field logs, data processed into the GBA, and a Violation Sketch is created for private source violations. All confirmed occurrences are then filtered to their respective rehabilitative sub-program for remediation.

Main Line Jetting

The sewer division has created a list of troublesome main lines throughout the City that require additional attention each month. This list is developed based on problems with roots, grease, mineral deposits, etc… Each location has a severity rating that determines how many times a month or year that these areas must be addressed until repairs have been made.

The sewer division also performs daily cleaning in specific sewer sheds based on the location of the TV truck, approximately 20,000 linear feet of main line sewer is cleaned each month. It takes approximately 4 years to clean all main lines in the City.

Sump Pump Amnesty Program

The program is intended to allow residents to have their sump pump systems tested to ensure there are no illicit connections. Under this program residents can take advantage of the City's reimbursement ordinance (0-21-00) to help cover the cost of the removal of an illicit connection. To learn more about the Sump Pump Amnesty Program, visit our website at www.florence-ky.gov.

REHABILITATION

The following activities conducted by the Public Services Department are categorized as **rehabilitation** activities:

Main Line Relining

The sewer division is focusing on developing economical and permanent systems for infrastructure repair and corrosion protection. Storm water infiltration and deterioration caused by hydrogen sulfide gas (H2S) are the main factors when considering a location for sewer main relining. Sewer lines are evaluated yearly by the use of Closed Caption Television (CCTV) inspections. These inspections are then rated in accordance with Lucity Infrastructure Management Software. The rated scale allows us to prioritize our rehabilitation needs and time frames in which to complete the work. Currently, all main line relining is bid out to an outside contractor.

Manhole Rehabilitation

The sewer division performs manhole inspections daily to develop a prioritized list for manhole repairs. Many of the issues found are infiltration, H2S presence and the need for seal tight lids on manholes. Each of these deficiencies are rated to help determine the appropriate rehabilitation method needed for that specific location. The sewer division currently performs in house rehabilitation methods such as installing seal tight lids, sealing joints in the manhole and replacing sections of a manhole. All manhole relining at this time is bid out to an outside contractor.

REPLACEMENT

Replacement techniques are utilized when a sewer main line or manhole has reached a point that rehabilitation strategies do not adequately address its problems. Each replacement project is unique and a variety of engineering techniques are used to improve the condition. The sewer division performs inspections on all sewer infrastructure and rate the condition of a specific problem. Based on the condition assessment number associated with the problem a replacement list is then developed. The department bids out main line replacement work to an outside contractor.

UNFUNDED WATER/SANITARY SEWER PROJECTS

There are some water/sanitary projects that did not make the budgeting cycle for the next three years or where an upgrade in the repair strategy could be justified. These repair strategies require an amount of funds that are not able to be taken from the budgets of the next three years while keeping the rest of our utilities at a high level of quality. These projects are unfunded but in the event that funds are available, these projects will be rehabbed/replaced during the next three years. The improvement techniques are as follows:

PROJECT	DESCRIPTION
Rosetta Pump Station	Decommissioning Station
Fowler Creek Pump Station	Decommissioning Station
St. Judes Circle	Water Main Replacement

WATER & SANITARY REPAIR BUDGET & SCHEDULE

FISCAL YEAR - 2012/2013

BUDGET	
EXPENDITURES	
Capital Improvement Fund	$1,080,000.00
Water/Sewer In-House Fund	$ 40,000.00
TOTAL	**$1,120,000.00**

CONTRACTED REPAIRS

PROJECT	DESCRIPTION
Tee Sewer Shed	Sanitary Main Line Relining
Sander Sewer Shed	Sanitary Main Line Relining
Biggs Sewer Shed	Sanitary Main Line Relining
Orleans Pump Station	Decommissioning of Station
Rosetta and Fowler PS	Decommissioning of Station
Bustetter Drive	Water Main Replacement
Meadow Lane	Water Main Replacement
Orchard Drive	Water Main Replacement

WATER DIVISION SCHEDULED REPAIRS

Dead End Line Flushing: All dead end water lines, throughout the City, are to be flushed twice a year.

Valve Turning Program: This program involves the exercising of all critical valves annually; while turning the secondary valves in Zone Four (Appendix D).

Large Meter Testing: All water meters that are 3” or larger are to be tested annually.

Water Meter Upgrade: This involves the transformation from manual read meters to an automated meter reading system. This will be performed in the areas that have not been completed from the prior year.

Large Meter Replacement: This program identifies all meters that are 3” or larger that are either inadequately sized for their application or need replacement. A list of these meters is located in Appendix F.

Large Meter Vaults: This involves the yearly inspection of all of the City’s large meter vaults.

Fire Hydrants: This involves the inspection of fire hydrants in Zone Three (Appendix E). This also involves the replacement of older hydrants; a list of those hydrants is located in Appendix G.

SANITARY DIVISION SCHEDULED REPAIRS

Sanitary Televising: Televising of sanitary sewer main will be performed in the Rosetta & Tee Sewer Shed.

Sanitary Cleaning: Sanitary sewer cleaning will take place in the Tee Sewer Shed.

Manhole Rehab: The rehabilitation of existing manholes is done to eliminate storm water infiltration. This will take place in the Biggs Sewer Shed.

Flow Monitoring: Crews will perform flow monitoring in the Tee Sewer Shed.

Smoke and Dye Testing: Smoke testing will take place in the Pheasant Sewer Shed.

Sump Pump Amnesty: This activity will take place in the Pheasant Sewer Shed.

WATER & SANITARY REPAIR BUDGET & SCHEDULE

FISCAL YEAR - 2013/2014

BUDGET

EXPENDITURES	
Capital Improvement Fund	$930,000.00
Water / Sewer In-House Fund	$ 40,000.00
TOTAL	**$970,000.00**

CONTRACTED REPAIRS

PROJECT	DESCRIPTION
Tee Sewer Sheds	Sanitary Main Line Relining
Pheasant Sewer Shed	Sanitary Main Line Relining
Rosetta & Fowler Pump Stations	Pump Station Decommissioning
Locust Avenue	Water Main Replacement
Lloyd Avenue	Water Main Replacement
Lynn Street	Water Main Replacement
Large Meter Replacement	Meter Replacement

WATER DIVISION SCHEDULED REPAIRS

Dead End Line Flushing: All dead end water lines, throughout the City, are to be flushed twice a year.

Valve Turning Program: This program involves the exercising of all critical valves annually; while turning the secondary valves in Zone One (Appendix D).

Large Meter Testing: All water meters that are 3” or larger are to be tested annually.

Water Meter Upgrade: This involves the transformation from manual read meters to an automated meter reading system. This will be performed in the areas that have not been completed from the prior year.

Large Meter Replacement: This program identifies all meters that are 3” or larger that are either inadequately sized for their application or need replacement. A list of these meters is located in Appendix F.

Large Meter Vaults: This involves the yearly inspection of all of the City’s large meter vaults.

Fire Hydrants: This involves the inspection of fire hydrants in Zone Three (Appendix E). This also involves the replacement of older hydrants; a list of those hydrants is located in Appendix G.

SANITARY DIVISION SCHEDULED REPAIRS

Sanitary Televising: Televising of sanitary sewer lines and manholes will be performed in the Sanders Sewer Shed.

Sanitary Cleaning: Sanitary sewer cleaning will take place in the Sanders Sewer Shed.

Manhole Rehab: The rehabilitation of existing manholes is done to eliminate storm water infiltration. This will take place in the Pheasant Sewer Shed.

Smoke and Dye Testing: Smoke testing will take place in the Fowler Sewer Shed.

Sump Pump Amnesty: This activity will take place in the Fowler Sewer Shed.

WATER & SANITARY REPAIR BUDGET & SCHEDULE

FISCAL YEAR - 2014/2015

BUDGET	
EXPENDITURES	
Capital Improvement Fund	$930,000.00
Water/Sewer In-House Fund	$ 40,000.00
TOTAL	**$970,000.00**

CONTRACTED REPAIRS

PROJECT	DESCRIPTION
Biggs Sewer Shed	Dry Creek Transmission Main Relining
Fowler Creek Sewer Shed	Main Line Relining
Taco Bell Main Replacement	Main Line Replacement
St. Judes Circle	Water Main Replacement Phase I
Burgess Drive	Water Main Replacement
Gloucester Drive	Water Main Replacement
Large Meter Replacement	Meter Replacement

WATER DIVISION SCHEDULED REPAIRS

Dead End Line Flushing: All dead end water lines, throughout the City, are to be flushed twice a year.

Valve Turning Program: This program involves the exercising of all critical valves annually; while turning the secondary valves in Zone Two (Appendix D).

Large Meter Testing: All water meters that are 3" or larger are to be tested annually.

Water Meter Upgrade: This involves the transformation from manual read meters to an automated meter reading system. This will be performed in the areas that have not been completed from the prior year.

Large Meter Replacement: This program identifies all meters that are 3" or larger that are either inadequately sized for their application or need replacement. A list of these meters is located in Appendix F.

Large Meter Vaults: This involves the yearly inspection of all of the City's large meter vaults.

Fire Hydrants: This involves the inspection of fire hydrants in Zone Three (Appendix E). This also involves the replacement of older hydrants; a list of those hydrants is located in Appendix G.

SANITARY DIVISION SCHEDULED REPAIRS

Sanitary Televising: Televising of sanitary sewer lines and manholes will be performed in the Biggs Sewer Shed.

Sanitary Cleaning: Sanitary sewer cleaning will take place in the Biggs Sewer Shed.

Flow Monitoring: Crews will perform flow monitoring in the Biggs Sewer Sheds.

Manhole Rehab: The rehabilitation of existing manholes is done to eliminate storm water infiltration. This will take place in the Fowler Sewer Shed.

Smoke and Dye Testing: Smoke testing will take place in the Rosetta Sewer Shed.

Sump Pump Amnesty: This activity will take place in the Rosetta Sewer Shed.

STORM WATER TAB

CITY OF FLORENCE
PUBLIC SERVICES DEPARTMENT

STORM SEWER REPAIR POLICIES AND APPROACH
2012-2015

INTRODUCTION
The City of Florence Storm Sewer System consists of **142** miles of storm conduit, **2,897** curb inlets, **604** manholes, **12** City maintained detention/retention basins and **205** privately maintained detention basins. The Public Services Department is responsible for the maintenance and management of the system, as well as, ensuring compliance with the federally mandated **Storm Water Phase ll Program**.

The department provides project management, preventative maintenance, improvements, repairs and regulatory compliance requirements for the system. Duties performed by the departmental personnel include system cleaning, CCTV inspections, new installation and system repairs. The department is also responsible for project management of contracted work, oversight of engineering studies, as well as inspection and acceptance of new construction by developers.

The Public Services Department performs yearly inspections on both City maintained and privately maintained detention basins. This information is entered into the Departments Computerized Maintenance Management System (GBA). The department is also in the process of collecting inventory and condition assessment information and entering that data into the GBA and GIS systems.

The City established a storm water system with a user fee in 1992. The City's first storm water master plan was completed in 1990 and subsequent updates were completed in 2005. The storm water collection system was first installed in the 1950's and consists of PVC, concrete and galvanized metal piping with a small portion of the system being open ditch type. As part of the 2005 storm water master plan update the City clearly defined "Waters of Florence " in order to delineate private and public storm water issues.

STORM SEWER PHASE II PROGRAM

In 2003, the US EPA's National Pollution Discharge Elimination System (NPDES) program for Kentucky began requiring that municipalities within urbanized areas obtain stormwater discharge permits to better manage their publicly owned stormwater collection and discharge systems from town roads and properties. The objective of these newly issued water quality permits (called the Phase II MS4 permits), was to minimize the impacts to water quality and wetlands from these municipally owned stormwater discharge systems.

The City of Florence is a Phase II Community and has designed its storm water program to reduce the discharge of pollutants to the maximum extent practicable, protect water quality and satisfy the appropriate water quality requirements of the Clean Water Act. Implementation of

Best Management Practices (BMP's) are in place and measurable goals are assigned to satisfy each of the six minimum control measures, which are:

- *Public Education & Outreach*
- *Public Involvement & Participation*
- *Illicit Discharge & Elimination*
- *Construction Site Runoff*
- *Post Construction Runoff Control*
- *Pollution Prevention & Good Housekeeping*

STORM SEWER MANAGEMENT STRATEGIES

The City of Florence Public Services Department utilizes four distinct storm sewer management strategies in its daily routine. These strategies can be organized as follows:

- *Routine Maintenance*
- *Preventive Maintenance*
- *Rehabilitation*
- *Replacement*

The remainder of this document will provide an overview of the strategies we provide.

ROUTINE MAINTENANCE

The following activities conducted by the Public Services Department are categorized as **routine maintenance** activities:

Manhole Inspection

Storm sewer inventories and inspections are conducted with the use of a GBA Field Module. This allows for the deployment of the infrastructure management system into the field on ruggedized laptops. Both inventory and inspection data are collected and entered into the field module on-site, reducing potential data processing mistakes. During the inspection process, each structure is geographically fixed with the use of a handheld global positioning system with sub-meter accuracy. Digital photos are taken of the site to document the manhole layout and any abnormalities that may be present. These photos are attached to both the inventory and the inspection record within the GBA. This data is synchronized with the Master GBA in the office. During the inspection, problems are logged into the field module and filtered through a weighted matrix. This produces a structural condition number that will provide direction with our storm sewer rehabilitation efforts.

Main Line Televising

The department operates a state-of-the-art Cues CCTV Inspection Truck with a self-propelled LAMP (lateral and mainline probe) system. The *self-propelled* LAMP accomplishes a one-pass pan

and tilt inspection of the mainline pipes 6" and larger. Equipped with a high-resolution camera, the LAMP picture in picture feature enables the operator to monitor the pan and tilt inspection of the mainline. LAMP is an essential inspection tool for identifying infiltration and inflow, solids accumulation, root infiltration, pipe defects, and the structural condition of mainline storm sewers.

Detention/Retention Basin Inspection

The Engineering and Inspection Services (EIS) Division inspects all privately and City owned basins throughout the City. Repairs are documented on a field form and entered into the GBA database for record keeping and for use of developing a repair list for field crews on City owned basins. For any privately owned basins that require additional attention, letters are developed for these owners stating the appropriate measures that are required to make the basin function at its designed capacity. Common deficiencies found in basins are debris, erosion, failure of inlet or outlet structures, sediment accumulation and other miscellaneous deficiencies that could prevent the basin from working at its optimum level.

PREVENTIVE MAINTENANCE

The following activities conducted by the Public Services Department are categorized as **preventive maintenance** activities:

Storm Inlet Cleaning

City crews perform inspections and cleaning after each significant rain event to make sure that storm inlets stay free of debris. The department refers to any structures that accumulate debris or that are an issue during rain events as "choke points". The Sanitary Sewer Division is equipped with a Vactor truck that is capable of removing all debris from specified choke points and disposing of the debris in an appropriate manner. A designated crew is responsible for inspecting all storm inlets throughout the City during a rain event.

Main Line Jetting

The City has created a list of troublesome main lines throughout the City that require additional attention each month. This list is developed based on problems with roots, sediment, flooding and other miscellaneous issues. Each location is given a severity rating that determines how many times a month or year that these areas must be addressed until the proper repairs can be made. The City has one crew dedicated to the Storm Sewer Cleaning and Preventive Maintenance Program.

Edge Drains

Edge drains collect storm water drainage behind the curb before it hits the street. It then directs the collected storm water into the storm sewer system at catch basins. The City installs edge drains at locations where drainage issues are a problem. Many of these locations are chosen based on icy spots in the street found during the winter. Edge drains help protect the streets from storm water runoff that can wash away the subgrade causing the streets to fail before their life expectancy is up.

REHABILITATION

The following activity conducted by the Public Services Department is categorized as a **rehabilitation** activity:

Watershed Analysis

The City of Florence conducts studies on flooding and drainage issues throughout the City's multiple watersheds. The studies are conducted over a period of time in which data collection, data analysis, preparation of findings and recommendations are made. The use of flow monitors and rain gauges are used to compile data to evaluate a watershed's flow capacity and performance during different rain events. The data is then extrapolated out to show what different rain events do to a watershed. The studies also include a section of resident's interview comments. These residents are asked to explain what they feel their watershed is doing during different rain events. After each watershed analysis, recommendations are developed, prioritized and budgeted for repairs. Some activities generated from these studies could include bank stabilization, pipe relining, grading, re-channeling and other miscellaneous activities.

REPLACEMENT

The following activity conducted by the Public Services Department is categorized as a **replacement** activity:

Replacement

Replacement techniques are utilized when a storm sewer main line or manhole has reached a point that rehabilitation strategies do not adequately address its problems. Each replacement project is unique and a variety of engineering techniques are used to improve the condition. The City performs inspections on all storm sewer infrastructure and then rates the condition of this infrastructure based on any specific problems. Upon the completion of the inspections a condition number is associated with the problem. Once the condition numbers have been compiled, a replacement list is then developed.

STORM WATER REPAIR BUDGET & SCHEDULE

FISCAL YEAR – 2012/2013

BUDGET

EXPENDITURES	
Capital Improvement Fund	$450,000.00
TOTAL	**$450,000.00**

CONTRACTED REPAIRS

PROJECT	DESCRIPTION
Storm Water Improvements	Improvements Associated with Street Repairs
Storm Water Improvements	Improvement Associated with Immediate Need Projects
Boone Valley Watershed	Storm Pipe Installation
Rhekamp Outlet Repairs	Drainage Improvements
Kmart Detention Pond	Drainage Improvements
Utz Drive	Storm Sewer Project
Coretta Drive Watershed	Watershed Study
Master Planning	Professional Consulting Studies
Reforestation Project	Water Quality Tree Plantings / Bioswales

DIVISIONAL REPAIRS

Choke Point Cleaning: This program involves the crews cleaning scheduled sections of the Storm Sewer System per the specified maintenance program or as the situation dictates.

Catch Basin Repairs: This activity takes place as discrepancies are identified and scheduled for repair.

Drain Tile Placement: Icy spots causing hazardous conditions on City maintained streets are identified throughout the winter months, if warranted drain tile is put in place to eliminate the problem.

STORM WATER REPAIR BUDGET & SCHEDULE

FISCAL YEAR - 2013/2014

BUDGET

EXPENDITURES	
Capital Improvement Fund	$450,000.00
TOTAL	**$450,000.00**

CONTRACTED REPAIRS

PROJECT	DESCRIPTION
Storm Water Improvements	Improvements Associated with Street Repairs
Storm Water Improvements	Improvement Associated with Immediate Need Projects
Kohls Detention Pond	Storm Sewer Project
Lynn Street	Storm Sewer Project
Circle Drive	Storm Sewer Project
Coretta Watershed	Watershed Improvements
Master Planning	Professional Consulting Studies
Reforestation Project	Water Quality Tree Plantings

DIVISIONAL REPAIRS

Choke Point Cleaning: This program involves the crews cleaning scheduled sections of the Storm Sewer System per the specified maintenance program or as the situation dictates.

Catch Basin Repairs: This activity takes place as discrepancies are identified and scheduled for repair.

Drain Tile Placement: Icy spots causing hazardous conditions on City maintained streets are identified throughout the winter months, if warranted drain tile is put in place to eliminate the problem.

STORM WATER REPAIR BUDGET & SCHEDULE

FISCAL YEAR - 2014/2015

BUDGET

EXPENDITURES	
Capital Improvement Fund	$475,000.00
TOTAL	**$475,000.00**

CONTRACTED REPAIRS

PROJECT	DESCRIPTION
Storm Water Improvements	Improvements Associated with Street Repairs
Storm Water Improvements	Improvement Associated with Immediate Need Projects
Kernal & Ravenswood	Storm Pipe Installation
Coretta Watershed	Watershed Improvements
Wal-Mart Watershed	Detention Basin Improvements
Master Planning	Professional Consulting Studies
Reforestation Project	Water Quality Tree Plantings

DIVISIONAL REPAIRS

Choke Point Cleaning: This program involves the crews cleaning scheduled sections of the Storm Sewer System per the specified maintenance program or as the situation dictates.

Catch Basin Repairs: This activity takes place as discrepancies are identified and scheduled for repair.

Drain Tile Placement: Icy spots causing hazardous conditions on City maintained streets are identified throughout the winter months, if warranted drain tile is put in place to eliminate the problem.

PARKS AND RECREATION TAB

CITY OF FLORENCE
PUBLIC SERVICES DEPARTMENT

PARKS POLICIES AND APPROACH
2012-2015

INTRODUCTION
The City of Florence Public Services Department is responsible for maintenance and upgrades on all City parks, grounds, paths and sidewalks. The Public Services Department strives to enhance the quality of life for Florence residents. Well maintained, accessible, quality parks and green spaces can shape our City's image. A sound parks and grounds policy concerning maintenance and capital improvements on City owned property helps enhance the quality of life for our customers.

The Department strives to achieve a variety of goals with the Parks and Grounds Management Policy. These goals include:

- Maintain safe and clean facilities.
- Provide a compelling vision for the future of the City and its parks.
- Provide involvement and contribution opportunities for neighborhoods, volunteers, and individuals.
- Create, preserve and enhance green space and park linkage systems.
- Beautify and visually enhance the City's open space system.

Florence currently owns and maintains **11** parks. Full development of these parks will go a long way toward providing the City with a recognizable identity in the region.

A cooperative agreement exists between Boone County Parks & Recreation Department (BCPR) and the City of Florence. In general, the BCPR and City of Florence partner up in the maintenance and management of the Florence Nature Park, Lincoln Woods Park and Skate Park. In some cases, BCPR is responsible for management of contractual repairs and 50% of the cost. The City pays the remaining 50% of the cost in these instances.

MAINTENANCE

The Public Services Department is responsible for detail grass cutting and any upgrades to BCPR services. This includes the maintenance of all landscape planting areas and trees (purchase and installation, mulch, fertilizer, watering, weeding); installation, maintenance and improvements to parking and walkway areas (pothole patching, pavement repairs, pavement sealing/striping, walkway installation, edging); scheduling use of parks/shelters. Additionally, the Department is responsible for capital improvements to the City's parks, including all master plan implementations and construction of new facilities.

This document presents a brief outline of the Department's park management strategies. The strategies will illustrate how the City strives to maintain and develop our Parks.

This document is updated annually and will include any advances in this field that the City has or will implement as well as any changes that need to be implemented due to various factors. The information used in order to come up with the best strategies, in regards to park improvements, are acquired from many resources such as master planning, funding, location etc...

INVENTORY

The parks and recreational facilities evaluated in this report are listed as follows:

Florence Nature Park

This 15 acre park was acquired in 1986.

Florence Nature Park is located off of Banklick Drive. Features include the Evelyn M. Kalb Gathering House, walking trails, restrooms, gazebo, grill, drinking fountain, parking lots and open space.

Lincoln Woods Park

This 15 acre park was developed in 1985.

Lincoln Woods Park is located on City Park Drive, accessible off Surfwood Drive or Rosetta Drive. Features include basketball court, tennis court, baseball/softball fields, playground area, shelter, grill, restrooms, drinking fountain and parking lots.

Orleans Park

Acquired in 2000 the 9.5 acres was donated by Fischer Development and the City purchased an adjoining 1.5 acres to make this an 11 acre active park.

Orleans Park is located within the Orleans North subdivision. The neighborhood park consist of a bridge, sled hill, basketball court, tennis court, volleyball court, playground area, open field space, restroom, drinking fountain, paved trail, parking lot, grill and picnic shelter.

South Fork Park

Acquired 5 acres in 1997 and 37 acres in 2000. All land was donated by the Farmview Subdivision Developer. This made South Fork a 42 acre active park.

South Fork Park is located within the Farmview subdivision. The park features over ½ mile of walking/ bike paths, a pedestrian bridge, natural wooded / meadow areas, open play area, shelter, grill, restroom, drinking fountain, playground area, parking lot, basketball and volleyball courts.

Stringtown Park

This 8 acre park was purchased by the City in 2001.

Stringtown Park is located on Burlington Pike / KY 18 between Kathryn Avenue and Wallace Avenue. Features include a walking trail / bike path, playground area, basketball court, cornhole stations, grill, restroom, drinking fountain, shelter, open green space and parking lot.

Kentaboo Park
Kentaboo Park is located off of Clark Street. Access is through residential streets off of Kentaboo Avenue. This park is currently undeveloped.

Walnut Creek Park
This 2.5 acre neighborhood park contains open green space and is accessible from Cedar Wood Circle via a concrete walking path. Parking is available on the street.

Skate Park
The 22,000 sq. ft. facility was a joint project between the City of Florence and Boone County designed by Suburban Rails and Brandstetter Carroll.

Skate Park is located on the north end of the Florence Government Center Campus. Features include shelters, seat walls, drinking fountains, restrooms, parking lot and 3 levels of rider difficulty play areas. A street plaza section for beginners, street course section for intermediate users and advanced bowls for the more experienced.

Aquatic Center
This 4 acre Aquatic Facility opened the summer of 2003.

Aquatic Center is located on the south end of the Florence Government Center Campus off of Ewing Boulevard. Features include two spray grounds for various ages, 6 lane 25 meter competition pool, two slides (speed & spiral), zero depth pool, lazy river, sunbathing areas, shelters, funbrellas, bathhouse, concession stand and parking.

The Aquatic Center is open for use from Memorial weekend to Labor Day.

Boone County High School Tennis Court
The tennis courts are located on Burlington Pike / KY 18, adjacent to Boone County High School.

World of Golf
This 65 acre property / facility is owned by the City of Florence. In 2011 the existing building, mini golf and maintenance building were replaced with new.

World of Golf is located on Woodspoint Drive adjacent to I-75/71 off of Burlington Pike / KY Route 18. Features include an 18 hole par 3 golf course, 18 hole miniature golf course, indoor & outdoor driving range, swing analysis equipment, indoor putting green, pro shop, simulator, video game machines, restaurant and shelter.

PARKS & RECREATION BUDGET & SCHEDULE

FISCAL YEAR - 2012/2013

BUDGET

EXPENDITURES	
Contracted Work	$300,000.00
TOTAL	**$300,000.00**

CONTRACTED REPAIRS

PROJECT	DESCRIPTION
South Fork & Orleans Park	Restroom Improvements
Boone County High School	Tennis Court Painting & Practice Wall
South Fork Park	Basketball Court Painting
Kentaboo Park	Master Plan
Skate Park	Fencing / Landscaping

DIVISIONAL REPAIRS

Play Ground Inspections:	The playgrounds are inspected annually by a certified playground inspector.
Monthly Inspections:	The park grounds and equipment are given a visual inspection on a monthly basis.
Cleaning & Waterproofing:	The gazebos, shelters, decks, bridge, bathroom enclosures and other wooden structures are cleaned and waterproofed annually.
Insect Control:	The wooden fences that are found in our parks are sprayed for termites on an annual basis.

PARKS & RECREATION BUDGET & SCHEDULE

FISCAL YEAR - 2013/2014

BUDGET

EXPENDITURES	
Contracted Work	$350,000.00
TOTAL	**$350,000.00**

CONTRACTED REPAIRS

PROJECT	DESCRIPTION
Orleans Park	Overlook Pavilion
Orleans Park	Cornhole / Sidewalks
South Fork Park	Sport / Tennis Court Installation

DIVISIONAL REPAIRS

Play Ground Inspections:	The playgrounds are inspected annually by a certified playground inspector.
Monthly Inspections:	The park grounds and equipment are given a visual inspection on a monthly basis.
Cleaning & Waterproofing:	The gazebos, shelters, decks, bridge, bathroom enclosures and other wooden structures are cleaned and waterproofed annually.
Insect Control:	The wooden fences that are found in our parks are sprayed for termites on an annual basis.

PARKS & RECREATION BUDGET & SCHEDULE

FISCAL YEAR - 2014/2015

BUDGET

EXPENDITURES	
Contracted Work	$350,000.00
TOTAL	**$350,000.00**

CONTRACTED REPAIRS

PROJECT	DESCRIPTION
South Fork Park	Lower Playground Area-Phase I
Kentaboo Park	Design, Engineering, Grading, Picnic Shelter, Parking Lot
Park & ROW	Wood Structure Sealing

DIVISIONAL REPAIRS

Play Ground Inspections:	The playgrounds are inspected annually by a certified playground inspector.
Monthly Inspections:	The park grounds and equipment are given a visual inspection on a monthly basis.
Cleaning & Waterproofing:	The gazebos, shelters, decks, bridge, bathroom enclosures and other wooden structures are cleaned and waterproofed annually.
Insect Control:	The wooden fences that are found in our parks are sprayed for termites on an annual basis.

SITE ASSET TAB

CITY OF FLORENCE
PUBLIC SERVICES DEPARTMENT

SITE ASSET POLICIES AND APPROACH
2012-2015

INTRODUCTION
The City of Florence Public Services Department is responsible for all maintenance, repairs, rehabilitation and inspection of over **600** site assets owned by the City. Site assets are located in Parks, City Owned Facilities and along City Right of Way. The assets included in this report consist of playground equipment, trash cans, benches, picnic tables, shelters, basketball/tennis/volleyball courts, bike racks, etc…

This document presents a brief outline of the department's site asset management strategies. The strategies contained in this document will illustrate how the City strives to maintain the site assets in a good condition.

This document is updated annually and will include any advances in this field that the City has or will implement as well as any changes that need to be implemented due to various factors. The information used order to come up with the best strategies, in regards to site assets, is acquired from many resources.

One resource used is the evaluation of our site asset through our annual inspection program. The inspection process is used to identify a multitude of site asset deficiencies that are then given a rating as to their severity. Once the inspection process is completed, these ratings are input into our GBA System. This system processes the new ratings and allows City staff to evaluate and prioritize each asset.

After all evaluations have been completed, City staff will then figure the cost of repairing / replacing the site asset as identified. The cost figures are based off a preliminary budget estimate. These estimates will be updated based on a more thorough examination of the needed repairs prior to the start of any work.

INVENTORY

The site assets evaluated in this report consist of the following inventory information: This does not include all assets but does address the majority.

- Playground Equipment – 40
- Aquatic Center Equipment – 15
- Trash Receptacles – 131
- Benches – 120
- Picnic Tables – 34
- Basketball Courts – 4
- Tennis Courts – 3
- Volleyball Courts – 3
- Shelters – 7
- Community Signs – 16
- Corporation Signs – 10
- Flag Poles – 7
- Bike Rack – 6
- Grills – 6
- Water Fountains – 10

ROUTINE MAINTENANCE

The following activities conducted by the Public Services Department are categorized as **routine maintenance** activities:

Annual Playground Equipment Audit Inspections

In the continuing effort by the City of Florence to provide quality, well-maintained, clean and safe parks and facilities for public use, the EIS Department has established an annual inspection program for each of the parks. All park inspections are performed by Certified Playground Safety Inspectors (CPSI) to ensure that the most recent standards have been followed and the park is safe for use.

Inspections will begin each year in or before the month of March with a target completion date of April 1st. This provides the City of Florence adequate time before the parks get busy to take corrective action if necessary.

The following "Priority Scale" is used to determine the severity of the deficiency.

- Priority 1 – Permanent Disability, loss of life or body part in a high risk area
- Priority 2 – Serious or minor injury or illness resulting in temporary disability
- Priority 3 – Non Compliant

Note: "Low Priority" is called out on a few occasions throughout this report. This reflects items that need painting and rust removal.

Once the certified playground inspector has completed all inspections a deficiency report is then developed. This report includes the priority rating of the deficiency found with a recommended corrective measure. The location of each deficiency is also labeled on a map specifying which piece of equipment is in non-compliance. Then finally a work order is written and assigned to a Public Services maintenance crew where deficiencies are corrected within a specified deadline.

Annual Site Asset Inspections

The department performs Annual inspections on all City owned site assets and this information is entered into the Department's infrastructure management software system (GBA). This information then provides the department with the ability to determine the repair strategy and scheduling priority of any site assets in need of rehabilitation.

Monthly Site Asset Inspections

The Department performs monthly inspections at all playgrounds where each asset is evaluated for safety measures. During this inspection each asset will be labeled 1) Okay 2) Needs Maintenance or 3) Request for Repair.

REHABILITATION

The following are rehabilitation measures conducted by the Public Services Department or contracted out:

Wood Structure Cleaning / Sealing

The cleaning / sealing of all wood structures are contracted out by the Public Services Department every three years. This work includes the sealing of all park shelters, pedestrian bridges, Nature Park gazebo / trellis, decks, fence, etc…

Painting

All site assets are inspected / evaluated on an annual basis. A report is generated through GBA which identifies the specific locations for painting during that fiscal year. The majority of painting is performed by City staff with the exception of the larger specialty items. An Example of a specialty items would be the slides at the Aquatic Center and the larger playground equipment in the Parks. These site assets would be contracted out.

REPLACEMENT

The following activity conducted by the Public Services Department is categorized as a **replacement** activity:

Replacement

Replacement techniques are utilized when a site asset has reached a point that rehabilitation strategies do not adequately address its problems. Each replacement project is unique and a variety of engineering techniques are used to improve the condition. The City performs inspections on all site assets and then rates the condition of this infrastructure based on specific criteria. Upon the completion of this inspection the site asset will be evaluated to determine if replacement is necessary.

SITE ASSET BUDGET & SCHEDULE

FISCAL YEAR - 2012/2013

SITE ASSET REPLACEMENT / REPAIR BUDGET

Account Budget - (Park Replacement Acct)	**$18,000.00**
Contracted Work	$10,000.00
In-House Work	$ 8,000.00
TOTAL	**$18,000.00**
Aquatic Center Acct:	**$50,000.00**

CONTRACTED REPAIRS

SITE ASSET	REPAIR STRATEGY
Stringtown Park Safety Surface	Sealing
Orleans Safety Surface	Sealing

IN – HOUSE REPAIRS

SITE ASSET	REPAIR STRATEGY
Annual Park Maintenance	Painting , Misc Repairs
Trash Can, Bench, Picnic Table, Water Fountain, etc…	Replacement

AQUATIC CENTER REPAIRS

SITE ASSET	REPAIR STRATEGY
Diamond Bright Improvements	Replacement / Repair

SCHEDULED DIVISIONAL REPAIRS

Storm Sewer Bio-Swales:	The Wetherington, Woodspoint & Mall Road bio-swales shall be trimmed down on an annual basis during the Fall.
Tree Trimming:	All trees in the right of way shall be trimmed to provide line of sight for vehicular traffic and signage on an annual basis.
Wood Structure Sealing:	All wooden shelters, decks, bridges, gazebos, trellis, fences, etc… are to be sealed every 3 years. The next scheduled sealing is during the **2014/2015** budget year.
Ewing Boulevard Medallion:	The medallion located along Ewing Boulevard shall be pressure washed annually and sealed every 3 years. The next scheduled sealing is during the **2013/2014** budget year.
Decorative Asphalt Crosswalks:	All decorative crosswalks located throughout the City shall be painted every 3 years. The next scheduled painting is during the **2013/2014** budget year**.**
Florence Freedom Stadium:	The Florence Freedom Stadium is to be painted every 10 years. The next scheduled painting is during the **2020/2021** budget year.

SITE ASSET BUDGET & SCHEDULE

FISCAL YEAR - 2013/2014

SITE ASSET REPLACEMENT / REPAIR BUDGET

Account Budget - (Park Replacement Account)	**$19,000.00**
Contracted Work	$ 11,000.00
In-House Work	$ 9,000.00
TOTAL	**$ 19,000.00**
Aquatic Center Acct:	**$25,000.00**

CONTRACTED REPAIRS

SITE ASSET	REPAIR STRATEGY
Playground Equipment	Painting

IN – HOUSE REPAIRS

SITE ASSET	REPAIR STRATEGY
Annual Park Maintenance	Painting , Misc Repairs
Trash Can, Bench, Picnic Table, Water Fountain, etc…	Replacement

AQUATIC CENTER REPAIRS

SITE ASSET	REPAIR STRATEGY
Equipment Improvements	Painting

SCHEDULED DIVISIONAL REPAIRS

Storm Sewer Bio-Swales:	The Wetherington, Woodspoint and Mall Road bio-swales shall be trimmed down on an annual basis, or as necessary, no less than once a year (typically Fall). Bio-swales shall be de-weeded, including rock borders, on a routine basis as necessary. Remove debris on intervals equal to adjacent grass cutting schedule or as necessary.
Tree Trimming:	All trees in the right of way shall be trimmed to provide line of sight for vehicular traffic and signage on an annual basis.
Wood Structure Sealing:	All wooden shelters, decks, bridges, gazebos, trellis, fences, etc… are to be sealed every 3 years. The next scheduled sealing is during the **2014/2015** budget year.
Ewing Boulevard Medallion:	The medallion located along Ewing Boulevard shall be pressure washed annually and sealed every 3 years. The next scheduled sealing is during the **2013/2014** budget year.
Decorative Asphalt Crosswalks:	All decorative crosswalks located throughout the City shall be painted every 3 years. The next scheduled painting is during the **2013/2014** budget year**.**
Florence Freedom Stadium:	The Florence Freedom Stadium is to be painted every 10 years. The next scheduled painting is during the **2020/2021** budget year.

SITE ASSET BUDGET & SCHEDULE

FISCAL YEAR - 2014/2015

SITE ASSET REPLACEMENT / REPAIR BUDGET

Account Budget - (Park Replacement Account)	**$21,000.00**
Contracted Work	$12,000.00
In-House Work	$ 9,000.00
TOTAL	**$20,000.00**
Aquatic Center Acct:	**$25,000.00**

CONTRACTED REPAIRS

SITE ASSET	REPAIR STRATEGY
South Fork Park Safety Surface	Sealing

IN – HOUSE REPAIRS

SITE ASSET	REPAIR STRATEGY
Annual Park Maintenance	Painting , Misc Repairs
Trash Can, Bench, Picnic Table, Water Fountain, etc…	Replacement

AQUATIC CENTER REPAIRS

SITE ASSET	REPAIR STRATEGY
Equipment Improvements	Painting

SCHEDULED DIVISIONAL REPAIRS

Storm Sewer Bio-Swales: The Wetherington, Woodspoint and Mall Road bio-swales shall be trimmed down on an annual basis, or as necessary, no less than once a year (typically Fall). Bio-swales shall be de-weeded, including rock borders, on a routine basis as necessary. Remove debris on intervals equal to adjacent grass cutting schedule or as necessary.

Tree Trimming: All trees in the right of way shall be trimmed to provide line of sight for vehicular traffic and signage on an annual basis.

Wood Structure Sealing: All wooden shelters, decks, bridges, gazebos, trellis, fences, etc… are to be sealed every 3 years. The next scheduled sealing is during the **2014/2015** budget year.

Ewing Boulevard Medallion: The medallion located along Ewing Boulevard shall be pressure washed annually and sealed every 3 years. The next scheduled sealing is during the **2016/2017** budget year.

Decorative Asphalt Crosswalks: All decorative crosswalks located throughout the City shall be painted every 3 years. The next scheduled painting is during the **2016/2017** budget year**.**

Florence Freedom Stadium: The Florence Freedom Stadium is to be painted every 10 years. The next scheduled painting is during the **2020/2021** budget year.

FACILITY TAB

CITY OF FLORENCE
PUBLIC SERVICES DEPARTMENT

FACILITY POLICIES AND APPROACH
2012-2015

INTRODUCTION

The Public Services Department maintains and manages **21** City owned buildings. These buildings contain approximately **220,731** square feet of space. The Department defines buildings as the actual structure and does not include the grounds area of the property. Management responsibilities vary from building to building depending upon use and tenant agreements. Maintenance responsibilities include: HVAC systems, electrical systems, plumbing systems, elevator, management of equipment service and maintenance contracts, fountains, suppliers lists, fire alarm systems, sprinkler systems, communications and data systems, cleaning, minor repairs, painting, and capital upgrades. Since each building is unique, all of these responsibilities are not required on all of the buildings.

This document presents a brief outline of the Department's facility management strategies. It will illustrate how the City strives to maintain and develop our Facilities.

This document is updated annually and will include any advances in this field. The City has or will implement any changes that need to be implemented due to various factors. The information used in order to come up with the best strategies is acquired from many resources such as master planning, funding, location etc...

INVENTORY

The facilities evaluated in this report are listed as follows:

Aquatic Center (8000 Ewing Boulevard)
Evelyn M. Kalb Gathering House (73 Goodridge Drive)
Firebase I (269 Main Street)
Firebase II (7201 Industrial Road)
Firebase III (1152 Weaver Road)
Florence Government Center (8100 Ewing Boulevard)
Fowler Creek Pump Station Bldg (8500 Fowler Creek)
Greenview Pump Station Building
Lincoln Woods Park Restroom
Nature Park Restroom
Niblack Senior Center
Office Building A (8020 Veterans Memorial Dr)
Pheasant Pump Station Building (Pheasant Rd)
Rosetta Clow Diversion Building (175 Rosetta Lane)
Rosetta Grounds Building (175 Rosetta Lane)
Rosetta Main Building (175 Rosetta Lane)
Rosetta Pump Station Building (175 Rosetta Lane)
Tanners Building 4 (7850 Tanners Lane)
Tanners Maintenance Facility (7850 Tanners Lane)
Woodspoint Maintenance Bldg (7330 Woodspoint)
World of Golf (7400 Woodspoint Drive)

UNFUNDED FACILITY PROJECTS

There are some facility projects that did not make the budgeting cycle for the next three years or where an upgrade in the repair strategy could be justified. These repair strategies require an amount of funds that are not able to be taken from the budgets of the next three years while keeping the rest of our facilities at a high level of quality. These projects are unfunded but in the event that funds are available, these projects will be rehabbed/replaced during the next three years. The improvement techniques are as follows:

PROJECT	DESCRIPTION
Government Center Lower Level Lobby	Tile Replacement

FACILITY REPAIR BUDGET & SCHEDULE

FISCAL YEAR - 2012/2013

BUDGET

EXPENDITURES	
Municipal Building Alterations	$42,000.00
City Enhancements	$35,000.00
TOTAL	**$77,000.00**

CONTRACTED REPAIRS

PROJECT	DESCRIPTION
Admin, Finance Carpeting	Replacement of existing carpet
Interior Painting	Painting improvements
Interior Painting	Painting Improvements
Bathrooms	Remodeling Improvements
Miscellaneous	Improvements / Repairs

FACILITY DIVISION SCHEDULED REPAIRS

Fountains: All inside/outside fountains shall be cleaned on a monthly basis.

HVAC Units: All HVAC filters shall be changed on a monthly basis.

Generators: Tested on a monthly basis.

Elevators: Elevator inspections are performed every 45 days.

Monthly Inspections: Lights, fire extinguishers, eye wash stations, emergency lighting, fire alarm panels, sprinkler systems, boilers, water tanks, backflow devices are all inspected monthly.

FACILITY REPAIR BUDGET & SCHEDULE

FISCAL YEAR - 2013/2014

BUDGET

EXPENDITURES	
Municipal Building Alterations	$42,000.00
City Enhancements	$35,000.00
TOTAL	**$77,000.00**

CONTRACTED REPAIRS

PROJECT	DESCRIPTION
Lower Level PD Tile	Replacement of existing tile
Police & PS Carpeting	Replacement of existing carpet
Public Service Painting	Painting Improvements
Carpeting	Replacement of Carpeting
Interior & Exterior Painting	Painting Improvements
Miscellaneous	Improvements / Repairs

ROSETTA REPAIRS

SITE ASSET	REPAIR STRATEGY
Exterior Painting – (Water Acct)	Painting Improvements
Exterior Painting – (Sewer Acct)	Painting Improvements

FACILITY DIVISION SCHEDULED REPAIRS

Fountains: All inside/outside fountains shall be cleaned on a monthly basis.

HVAC Units: All HVAC filters shall be changed on a monthly basis.

Generators: Tested on a monthly basis.

Elevators: Elevator inspections are performed every 45 days.

Monthly Inspections: Lights, fire extinguishers, eye wash stations, emergency lighting, fire alarm panels, sprinkler systems, boilers, water tanks, backflow devices are all inspected monthly.

FACILITY REPAIR BUDGET & SCHEDULE

FISCAL YEAR - 2014/2015

BUDGET

EXPENDITURES	
Municipal Building Alterations	$44,000.00
City Enhancements	$35,000.00
TOTAL	**$79,000.00**

CONTRACTED REPAIRS

PROJECT	DESCRIPTION
Interior & Exterior Painting	Painting Improvements
HVAC	Replacement
Bay Floor refinishing	Painting Improvements
HVAC	Replacement
Carpeting & Tile	Replacement of existing carpet & tile.
HVAC	Replacement
Miscellaneous	Improvements / Repairs

ROSETTA REPAIRS

SITE ASSET	REPAIR STRATEGY
HVAC – (Water Acct)	Replacement
HVAC – (Sewer Acct)	Replacement

FACILITY DIVISION SCHEDULED REPAIRS

Fountains: All inside/outside fountains shall be cleaned on a monthly basis.

HVAC Units: All HVAC filters shall be changed on a monthly basis.

Generators: Tested on a monthly basis.

Elevators: Elevator inspections are performed every 45 days.

Monthly Inspections: Lights, fire extinguishers, eye wash stations, emergency lighting, fire alarm panels, sprinkler systems, boilers, water tanks, backflow devices are all inspected monthly.

APPENDIX A

TAB

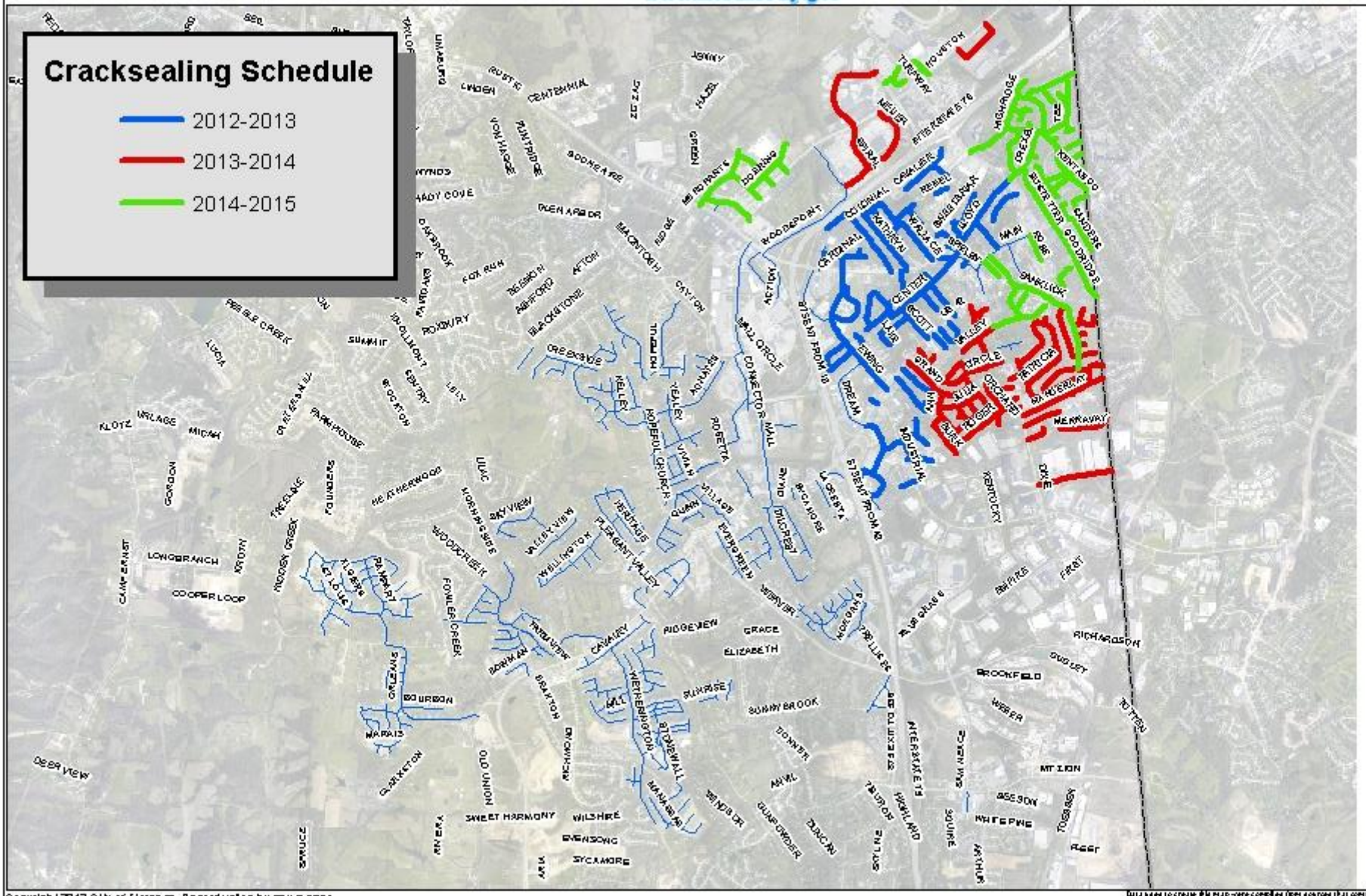
CRACKSEALING SCHEDULE

FISCAL YEAR 2012/2013

STREET NAME	LENGTH	CRACKSEAL ZONE
Allison Avenue	1358.80	5
Anchor Way	284.60	5
Ash Street	680.50	5
Canterbury Court	469.50	5
Cardinal Drive	1100.70	5
Cardinal Place	245.40	5
Carole Lane	492.90	5
Cavalier Boulevard	1671.60	5
Cavalier Court	669.50	5
Center Park Drive	2081.50	5
Center Street	3191.70	5
Claxon Drive	1099.10	5
Colonial Drive	634	5
Columbia Drive	242.80	5
Commerce Place	658.50	5
Coreta Drive	790.70	5
Dogwood Lane	333.20	5
Ewing Boulevard	4387.40	5
Foster Avenue	1004.70	5
Freedom Way	1295.20	5
Glen Street	654.90	5
Hillcrest Drive	1059.40	5
Hollywood Drive	1296.90	5
Joann Drive	797.70	5
Kathryn Avenue	2265.30	5
King Drive	275.50	5
Lake Drive	1165.80	5
Liberty Court	758.50	5
Lloyd Avenue	2531.90	5
Lynn Street	1072.10	5
Miriam Drive	2134.40	5
Montgomery Street	436.80	5
New Uri Avenue	1396.40	5
Niblack Memorial Drive	561.70	5
Oblique Street	527.60	5
Plantation	911.10	5
Price Pike	550.30	5
Rajean Drive	467.80	5
Rebel Drive	388.40	5
Roberta Avenue	1872.60	5
Russell Street	1295.60	5
Safeway Drive	1135.20	5
Scott Street	1267.20	5
Sebree Drive	1215.10	5
Shaun Alexander Way	386.90	5
Sussex Drive	1194.80	5
Sweetbriar Avenue	1358.10	5
Thomas Street	673.40	5
Utz Drive	2312.60	5
Veterans Memorial Drive	2098.10	5
Wallace Avenue	1524.00	5
Woodland Avenue	1193.30	5
Total Linear Feet: 59471.1'	DENOTES A PROJECT DO NOT SEAL	**Total Streets: 52**
Total Linear Miles: 11.3		

City of Florence GIS Map

www.florence-ky.gov



Data used to create this map were compiled from sources that comply with National Map Accuracy Standards. City of Florence assumes no warranty with respect to the accuracy or content of the information provided by this map. This map should be used for general planning purposes only.

0 3,050 6,100 12,200 18,300 24,400 Feet

1 inch = 4,522 feet

CITY OF FLORENCE KENTUCKY

City of Florence, Kentucky - A Great Place To Live, Work, and Play

N W E S

Map Printed: 5/18/2012

ArcMap Document: Crack.mxd

APPENDIX B
TAB

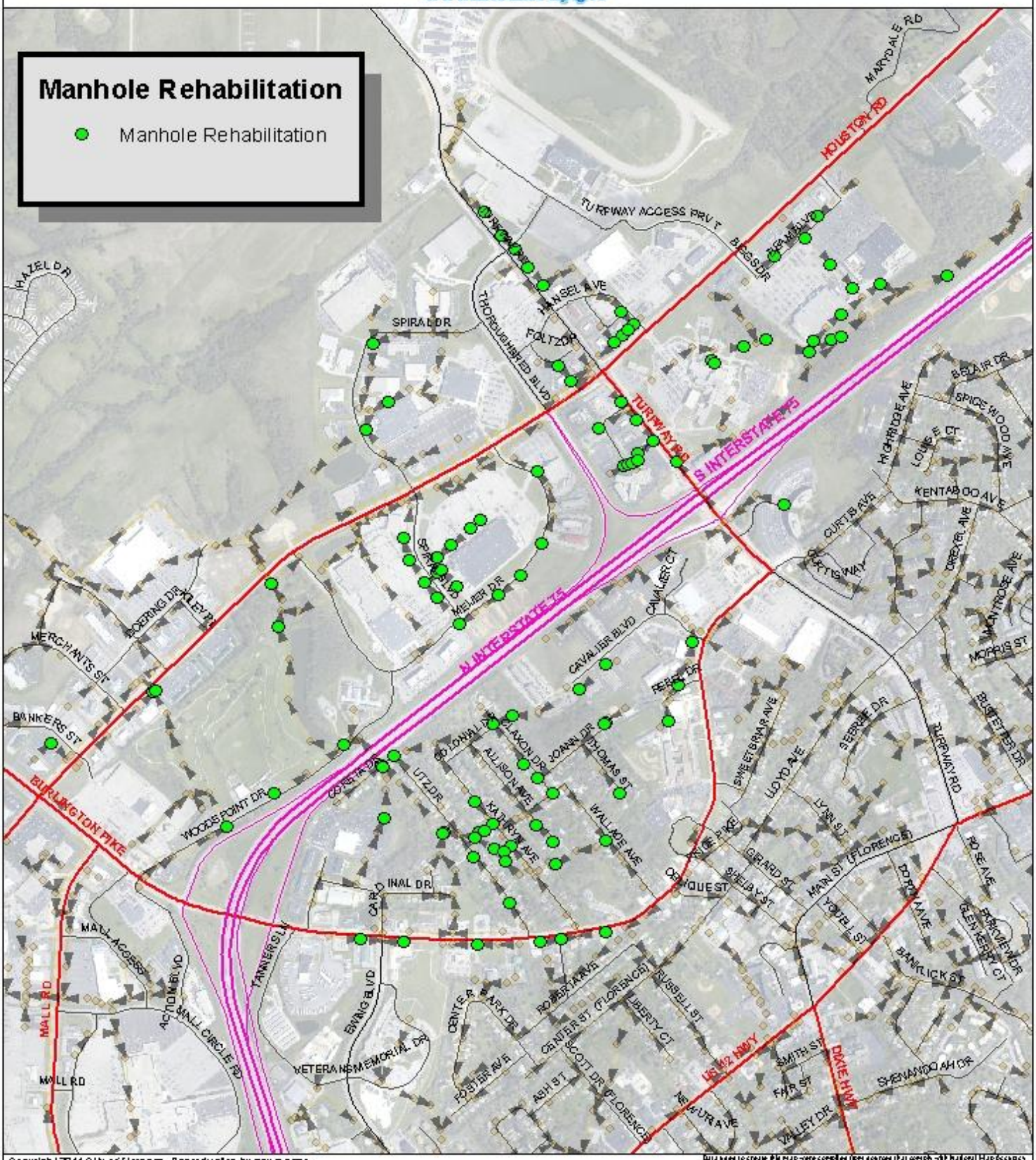
SANITARY INFRASTRUCTURE REHABILITATION LIST

FISCAL YEAR 2012/2013

L18 GRID	*L18 GRID*	*L17 GRID*	*K18 GRID*
MANHOLE REPAIRS	*MANHOLE REPAIRS*	*MANHOLE REPAIRS*	*MANHOLE REPAIRS*
L18-91	L18-21	L17-38	K18-80
L18-63	L18-198	L17-363	K18-8
L18-58	L18-192	L17-362	K18-79
L18-55	L18-189	L17-361	K18-77
L18-53	L18-164	L17-360	K18-76
L18-52	L18-161	L17-359	K18-74
L18-45	L18-160	L17-358	K18-73
L18-41	L18-155	L17-27	K18-7
L18-39	L18-15	L17-23	K18-69
L18-36	L18-133	L17-20	K18-68
L18-30	L18-130	L17-180	K18-67
L18-265	L18-122	L17-152	K18-66
L18-260	L18-114	L17-137	K18-63
L18-26	L18-11	L17-132	K18-62
L18-257	L18-109	L17-126	K18-6
L18-254	*L17 GRID*	L17-125	K18-59
L18-252	L17-54	L17-121	K18-58
L18-251	L17-53	L17-102	K18-57
L18-230	L17-50	L17-10	K18-56
L18-229	L17-481	L17-1	K18-55
L18-228	L17-472	*K18 GRID*	K18-54
L18-227	L17-465	K18-97	K18-53
L18-226	L17-464	K18-92	K18-52
L18-225	L17-440	K18-90	K18-50
L18-224	L17-433	K18-9	K18-5
L18-223	L17-43	K18-89	K18-49
L18-222	L17-429	K18-88	K18-48
L18-22	L17-428	K18-87	K18-47
L18-219	L17-427	K18-85	K18-46
L18-218	L17-426	K18-84	K18-44
L18-216	L17-416	K18-83	K18-43
L18-215	L17-41	K18-81	K18-41

City of Florence GIS Map

www.florence-ky.gov



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0 700 1,400 2,800 4,200 5,600 Feet

1 inch = 1,354 feet

City of Florence, Kentucky - A Great Place To Live, Work, and Play

Map Printed: 5/24/2012

ArcMap Document: GIS_Map

APPENDIX C
TAB

City of Florence GIS Map

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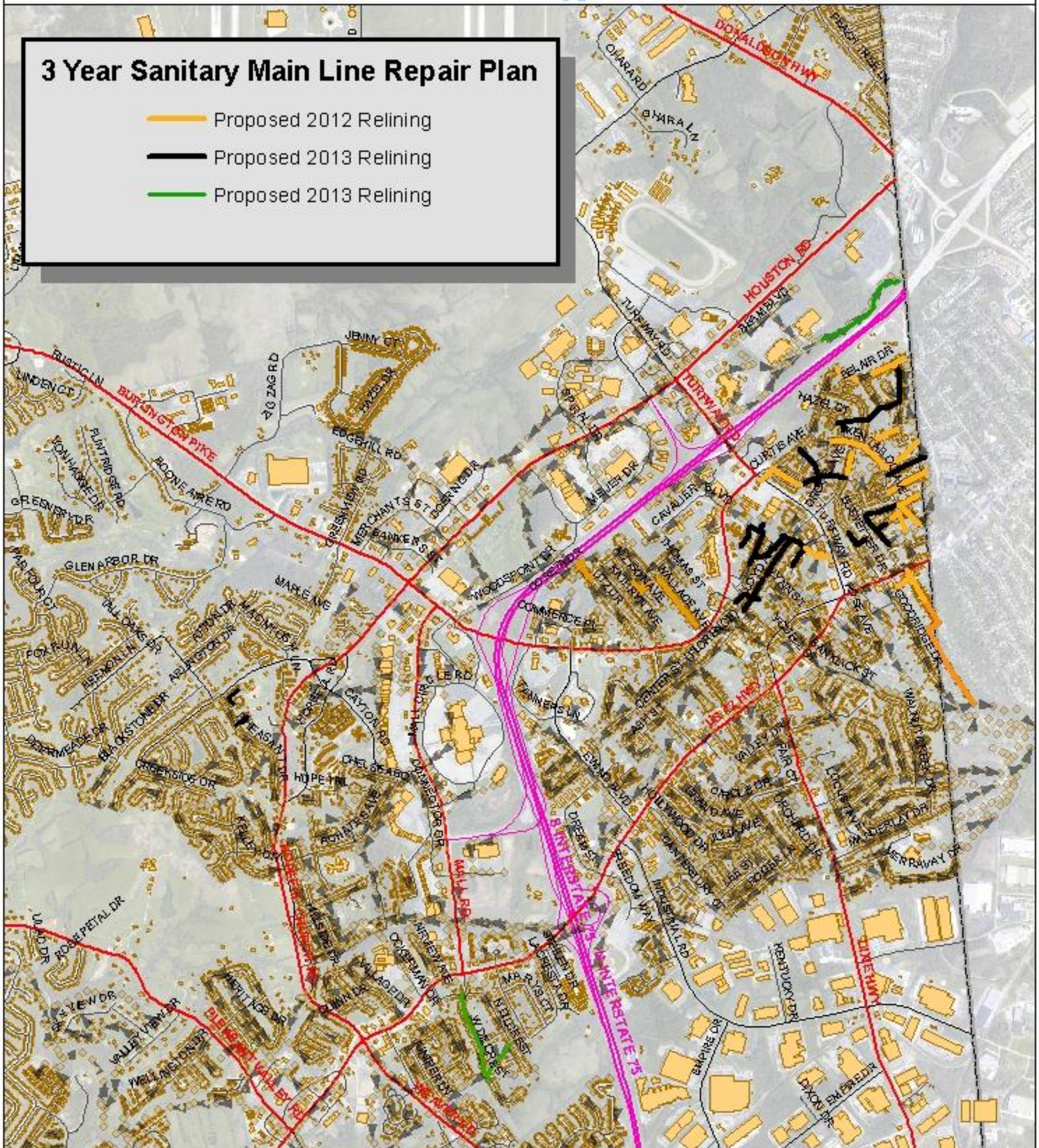

Data used to create this map were compiled from sources that comply with National Map Accuracy Standards. City of Florence assumes no warranty with respect to the accuracy or content of the information provided by this map. This map should be used for general planning purposes only.

0 1,500 3,000 6,000 9,000 12,000 Feet

1 inch = 2,851 feet

City of Florence, Kentucky - A Great Place To Live, Work, and Play

APPENDIX D
TAB

City of Florence GIS Map

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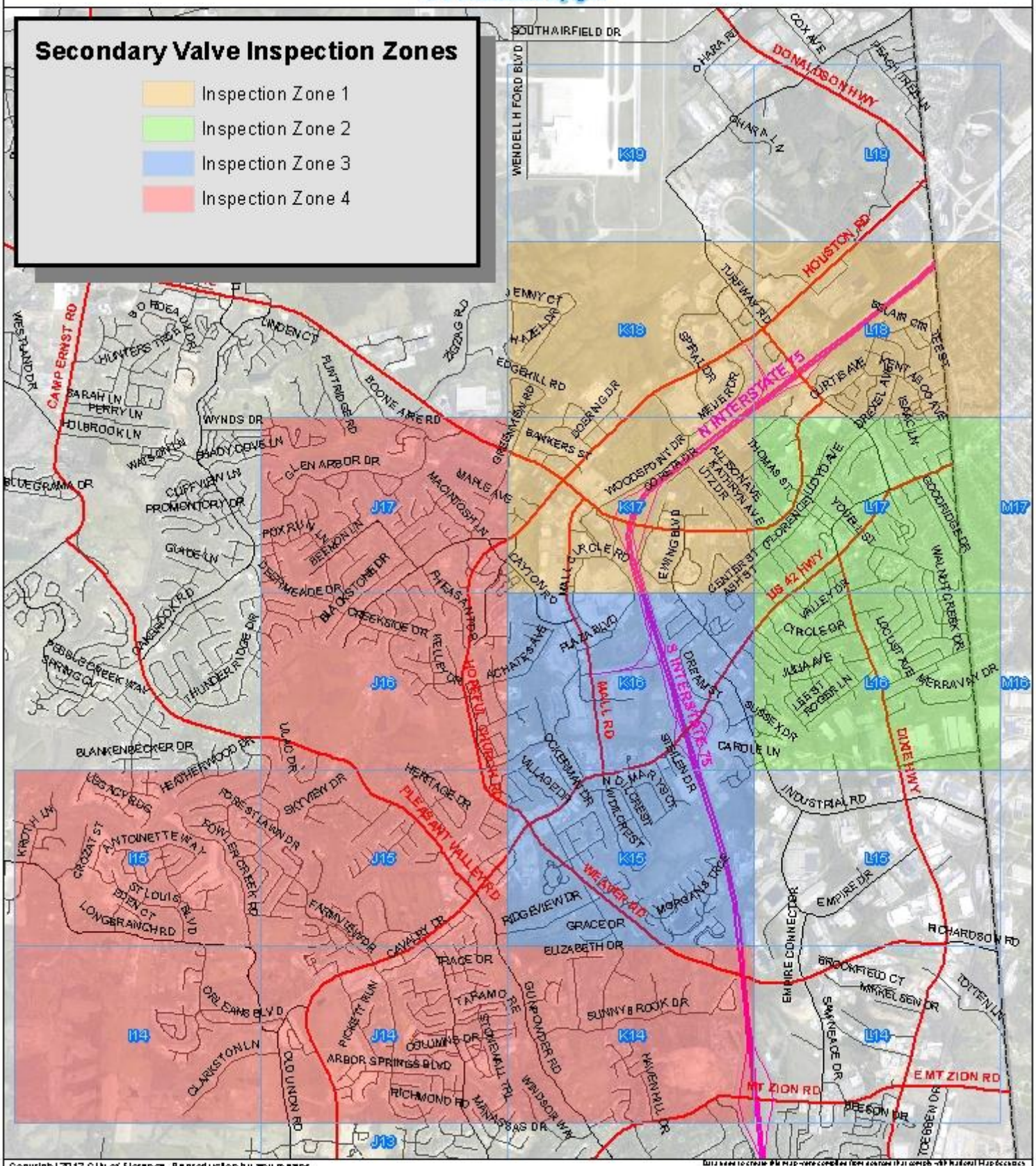

Data used to create this map were compiled from sources that comply with National Map Accuracy Standards. City of Florence assumes no warranty with respect to the accuracy or content of the information produced by this map. This map should be used for general planning purposes only.

0 2,000 4,000 8,000 12,000 16,000 Feet

1 inch = 3,797 feet

City of Florence, Kentucky - A Great Place To Live, Work, and Play

Map Printed: 5/16/2012

ArcMap Document: Valve Inspection Zones

APPENDIX E

TAB

City of Florence GIS Map

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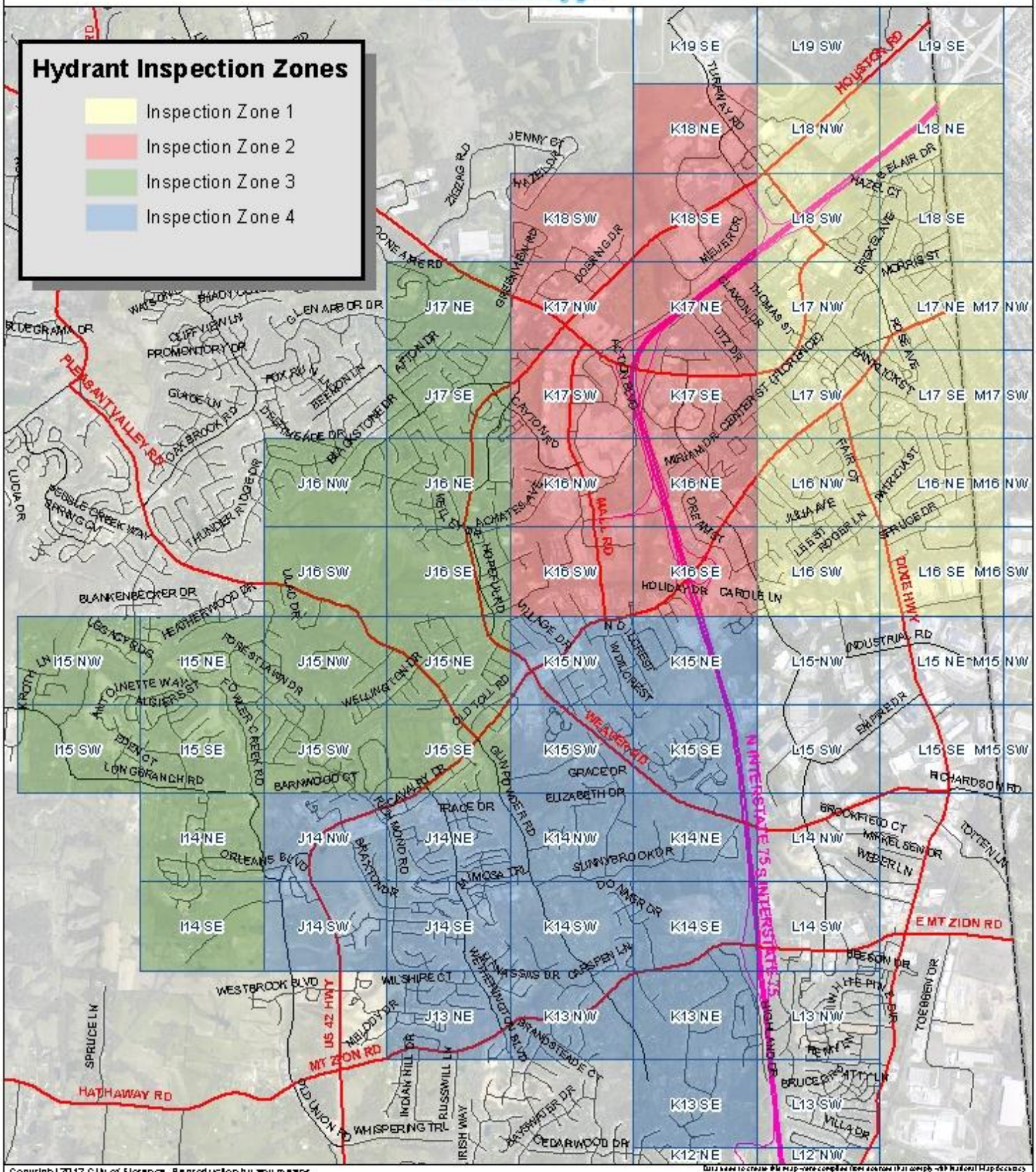

APPENDIX F

TAB

Large Water Meters
(Three Inch or Larger Candidates for Replacement)

3" Neptune Meters		
Address	**Date Installed**	**Serial Number**
350 MEIJER DR	5/6/2005	70122712
50 CAVALIER BLVD	10/25/2000	31928544
6000 MALL RD	**1/1/1980**	**35485**
6000 MALL RD	**1/1/1980**	**70035485**
6700 ASHGROVE PL	10/1/2003	26257898
6910 HOPEFUL RD	6/15/2006	49859591
6910 HOPEFUL RD	1/2/2004	70122711
7388 TURFWAY RD	6/15/2006	49859590
7454 TURFWAY RD	6/15/2006	49859593
7685 MALL RD	**4/16/1999**	**43841333**
7906 DIXIE HWY	10/30/2000	31916990
7909 DREAM ST	4/18/2005	41805421
7928 DREAM ST	6/15/2006	49859589
7950 FREEDOM WAY	1/17/2005	68040
7950 FREEDOM WAY	1/17/2005	68041
8000 SPRUCE DR	**4/27/1999**	**43134680**
8100 BURLINGTON PIKE	**4/19/1999**	**22131588**
8142 DIANE DR	10/27/2000	31921430
9000 SPRUCE DR	**4/27/1999**	**43134681**
3" Sensus Meters		
Address	**Date Installed**	**Serial Number**
10 YEALEY DR	7/19/2002	14073953
212 MAIN ST	12/20/2004	57193125
3000 MALL RD	**3/3/1992**	**2541199**
5000 MALL RD	**7/31/1992**	**3140929**
6761-6771 PARKLAND PL	12/11/2003	14244642
6950 SHENANDOAH DR BLDG 4	**7/24/1997**	**5783180**
7205 HOUSTON RD	5/3/2004	14060663
7300 TURFWAY RD	3/16/2005	51023087
7300 WOODSPOINT DR	12/11/2003	14245609
7373 TURFWAY RD	**7/13/1999**	**10765187**
7625 DOERING DR	10/10/2005	58008007
7830 COMMERCE DR	12/5/2002	13365082
8020 VETERANS MEMORIAL DR	**7/13/1999**	**10966120**
8035 ACTION BLVD	**8/15/1997**	**5786037**
8075 STEILEN DR	**11/9/1995**	**5807295**
8200 EWING BLVD	5/3/2010	65281545
8250 US 42 HWY	8/15/2001	13523462
828 HEIGHTS BLVD	**11/23/1992**	**2940428**
8510 OLD TOLL RD	10/23/2006	60665414
8551 ALDERSGATE ST	**9/1/1996**	**4765548**
4" Neptune Meters		
Address	**Date Installed**	**Serial Number**
6900 HOPEFUL RD	3/29/2001	26260488
4" Sensus Meters		
Address	**Date Installed**	**Serial Number**
SE QUADRANT 23	**7/14/1994**	**3647852**
2028 FLORENCE MALL	**7/15/1994**	**4827292**
2028 FLORENCE MALL	**7/14/1994**	**3654684**
2028 FLORENCE MALL	**7/14/1994**	**3651793**
30 CAVALIER BLVD	3/3/2006	59011993
7777 BURLINGTON PIKE	**9/3/1999**	**9842110**
7810 COMMERCE DR	**6/23/1994**	**4210810**
7915 US 42 HWY	**7/18/1994**	**3364791**

8049 DREAM ST	**2/10/1993**	**59058155**
8050 HOLIDAY PL	**7/18/1994**	**2477399**
8100 EWING BLVD	**7/13/1999**	**10443566**
6" Neptune Meters		
Address	**Date Installed**	**Serial Number**
NORTHBD REST AREA	10/28/2005	31918000
SOUTHBD REST AREA	10/28/2005	31918001
SUNSET & BELAIR	1/6/2005	4342450
6" Sensus Meters		
Address	**Date Installed**	**Serial Number**
248 MAIN ST	**8/26/1998**	**4852333**
4900 HOUSTON RD	**8/17/1999**	**9544375**
4990 HOUSTON RD	**9/1/1996**	**5007076**
7056 BURLINGTON PIKE	**4/7/1989**	**4846301**
7832 RIEHL DR	3/31/2000	12325350
8" Sensus Meters		
Address	**Date Installed**	**Serial Number**
100 CHRISTIAN DR	3/21/2001	7671583
7500 TURFWAY RD	**11/22/1993**	**3946917**
7500 TURFWAY RD	5/30/2007	61534981
10" Badger Meters		
Address	**Date Installed**	**Serial Number**
HOUSTON RD	**3/3/1986**	**85358777**

*Items in red indicate meters installed before the year 2000.

APPENDIX G
TAB

Fire Hydrants
(Candidates for Replacement)

Dresser		
Address	**Hydrant Number**	**Manufacturer**
8370 BOONE VALLEY DR	J15-3	Dresser
8581 WINTHROP CR	J15-79	Dresser
8591 WINTHROP CR	J15-82	Dresser
8568 WINTHROP CR	K15-74	Dresser
8554 WINTHROP CR	K15-82	Dresser
MALL ROAD	K16-137	Dresser
7958 US 42	K16-44	Dresser
8122 DIANE DR	K16-75	Dresser
SERVICE ROAD	K17-65	Dresser
348 CENTER PARK DR	K17-7	Dresser
MALL CIRCLE RD	K17-8	Dresser
279 MERRAVAY DR	L16-108	Dresser
249 MERRAVAY DR	L16-109	Dresser
7518 US 42	L16-20	Dresser
NIBLACK MEMORIAL DR	L16-30	Dresser
90 GOODRIDGE DR	L17-100	Dresser
7436 LIBERTY CT	L17-111	Dresser
Dresser (M&H)		
Address	**Hydrant Number**	**Manufacturer**
9012 STEEPLEBUSH DR	J15-53	Dresser (M&H)
8843 VALLEY CIRCLE DR	J15-238	Dresser (M&H)
125 PINEHURST DR	L16-110	Dresser (M&H)
6948 OAKWOOD DR	L18-75	Dresser (M&H)
5920 CURTIS WAY	L18-270	Dresser (M&H)
8193 MALL RD	K16-155	Dresser (M&H)
8134 DIANE DR	K16-157	Dresser (M&H)
FARMVIEW DR	J15-129	Dresser (M&H)
109 PINEHURST DR	L16-150	Dresser (M&H)
110 PINEHURST DR	L16-151	Dresser (M&H)
WATEROUS		
Address	**Hydrant Number**	**Manufacturer**
216 BURGESS LN	**J15-9**	**Waterous**
7753 MALL RD	K16-116	Waterous
7635 MALL RD	K17-125	Waterous
212 CLAXON DR	K17-45	Waterous
7553 MALL RD	K17-70	Waterous
7415 BURLINGTON PIKE	K17-75	Waterous
21 RUSSELL ST	L17-105	Waterous
7714 WALNUT CREEK DR	L17-170	Waterous
6599 NICHOLAS ST	L17-37	Waterous
6555 NICHOLAS ST	L17-50	Waterous
6303 CLARK ST	L18-38	Waterous
6914 OAKWOOD DR	L18-46	Waterous
6908 OAKWOOD DR	L18-48	Waterous
205 MARANATHA CT	L18-64	Waterous
6928 OAKWOOD DR	L18-67	Waterous

*Red indicates that the hydrant will be replaced as part of an upcoming water main rehab project.